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DETERMINANTS AND A MEASURE OF NAVY RECRUITER EFFECTIVENESS

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This research sought to develop a practical means of objectively measuring recruiter productivity. An equation was developed to predict productivity based on characteristics of the recruiter's geographic location and management policy. Using such an equation, production not under the direct control of a recruiter could be isolated.

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Using educational data from California school districts, an equation was developed for estimating a recruiter's expected production for a given geographic area. Over half of the variation in recruiter productivity could be attributed to individual differences among recruiters. Of the remaining variation, which was due to environmental factors, over one-third could be predicted on the basis of management policy and school district statistics, provided that (1) the productivity measure was weighted for the quality of output, and (2) the resources allocated to the recruiting effort were also considered in the prediction equation. Recruiter effectiveness was found to be distributed in a similar manner around the mean production values of each Navy Recruiting District. However, differences in mean production among the districts accounted for a significant portion of the variation in recruiter productivity. The variables representing the districts and one based on male minority enrollments in vocational education classes were the predominant factors in predicting recruiter production. The common practice of assigning proportionately more recruiters to denser metropolitan areas seemed to have a negative effect on the quality and quantity of recruits. The practice of assigning quotas and resources on the basis of the number of Qualified Military Eligibles and on the number of high school graduates in an area did not control for the differential potential of an area to produce quality recruits.

Total recruiter production is determined approximately equally by (1) the personal characteristics and abilities of the recruiter and (2) the potential of the recruiting station territory and the NRD in which it is located. Accordingly, individual recruiter effectiveness can be conceived as the ratio of actual productivity to expected productivity. The differential effects of NRDs on expected recruiter productivity and the variability among stations in the expected production of their individual recruiters suggest that improvements in goal assignment, resource allocation, and other management practices can be realized.

Recommendations were made concerning use of the procedures developed and additional research.

FOREWORD

This study was conducted in support of Advanced Development Subproject ZPN01.06 (Advanced Navy Recruiting System). The study evaluates indexes of recruiter productivity that could be used to equitably measure recruiters' production independent of differences in opportunity.

The assistance of the Navy Recruiting Command--especially of Navy Recruiting Area Eight and the San Francisco, Los Angeles, and San Diego Navy Recruiting Districts--is gratefully acknowledged. Particular appreciation is expressed for the assistance of CDR John F. Neese of the Navy Recruiting Command, Mr. Robert S. Boyd of Navy Recruiting Area Eight, and Dr. Edward F. Alf of the Navy Personnel Research and Development Center.

Finally, this study could never have been accomplished without the support and cooperation of the California State Department of Public Education under the direction of Wilson Riles, Superintendent.

The technical monitor was Dr. Norman Abrahams.

J. J. CLARKIN
Commanding Officer

SUMMARY

Problem

Programs to improve the efficiency and effectiveness of Navy recruiters have focused on selection, performance evaluation, work methods, training, incentives, recruiter aids, and recruit allocation. Although such programs should be evaluated periodically to determine that they are, in fact, improving recruiter effectiveness, appropriate measures are not available.

Objective

The objective of this research and development was to develop a measure of recruiter effectiveness that:

1. Is objective.
2. Represents the recruiter's contribution to the organization.
3. Reflects the recruiter's effort and abilities and the inherent potential of a territory for producing accessions to the Navy.
4. Is practical to use in the operational Navy environment.

Approach

The first step in this effort was to determine the degree to which individual recruiter characteristics and the operating environment contribute to variations in recruiter productivity. To do this, an equation was developed to predict productivity variation due to environmental characteristics--specifically, management policy and the recruiting potential of a given geographic area. The study sought measures of the environment that (1) were timely and current, (2) were broadly representative of an area's socioeconomic status, and (3) could be directly mapped to a recruiting station's area. For predictor variables, educational data were collected for every high school district and unified school district in California. The prediction equation was then used to estimate each recruiter's production. Effectiveness--the ratio of actual to expected production--was then determined for each recruiter. The effects of quotas were attenuated by selecting a period when quotas were not being met and by developing a production measure, called NETPLUS, that incorporated both the quantity and quality of a recruiter's output.

Results

Over half of the variation in recruiter productivity could be attributed to individual differences among recruiters. Of the remaining variation, which was due to environmental factors, over one-third could be predicted on the basis of management policy and school district statistics, provided that (1) the productivity measure was weighted for the quality of output, and (2) the resources allocated to the recruiting effort were also considered in the production equation. Recruiter effectiveness was found to be distributed in a similar manner around the mean production values of each Navy Recruiting District. However, differences in mean production among the districts accounted for a significant portion of the variation in recruiter productivity. The

variables representing the districts and one based on male minority enrollments in vocational education classes were the predominant factors in predicting recruiter production.

The common practice of assigning proportionately more recruiters to denser metropolitan areas seemed to have a negative effect on the quality and quantity of recruits. The practice of assigning quotas and resources on the basis of the number of Qualified Military Eligibles and on the number of high school graduates in an area did not control for areas' different potentials.

Conclusions

Total recruiter production is determined approximately equally by (1) the personal characteristics and abilities of the recruiters and (2) the potential of the recruiting station territory and the NRD in which it is located. Accordingly, individual recruiter effectiveness can be conceived as the ratio of actual productivity to expected productivity. The differential effects of NRDs on expected recruiter productivity and the variability among stations in the expected production of their individual recruiters suggest that improvements in goal assignment, resource allocation, and other management practices can be realized.

Recommendations

1. The theoretical model developed in this study should be the basis for future research aimed at understanding the impact of the recruiting environment on the productivity of a recruiting site.

2. Measures of recruiter effectiveness should consider the quality and quantity of a recruiter's production as well as the differential fertility of recruiting locations.

3. The procedures developed in this study for measuring recruiter effectiveness should be evaluated on a larger and more representative data base to gain a better understanding of the dynamics of environmental factors that affect the recruiting process.

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INTRODUCTION

Problem

Programs to improve the effectiveness of Navy recruiters have focused on selection, performance evaluation, work methods, training, incentives, recruiter aids, and recruiter allocation. Although such programs should be evaluated periodically to ensure that they are, in fact, improving recruiter effectiveness, appropriate measures are not available.

Purpose

The purpose of this research was to develop an objective measure of the effectiveness of Navy enlisted recruiters that (1) reflects the recruiter's skills, abilities, efforts, and contributions to the organization, (2) considers a recruiting territory's inherent potential, and (3) is practical to use. Such a measure of effectiveness would provide a sound basis for validating recruiter selection procedures and for evaluating recruiter performance, training programs, work methods, operational procedures, and recruiting programs. Other considerations require that the measure of effectiveness be based, insofar as possible, on current and readily available data that reflect the potential productivity of a recruiter's territory. An expected ancillary product was a set of variables that describe territory potential and that would be useful for developing marketing plans and strategies at the local level.

Background

Measures of Recruiter Performance and Effectiveness

The typical measure of a recruiter's performance and effectiveness has been a global rating by his superior. The liabilities and limitations of such ratings are already well documented; the most telling argument against their use is that they are typically neither consistent with nor independent of the actual production performance of individual recruiters (Fischl, 1976).

A more refined measure that reflects the judgment of superiors and peers is a rating scale of recruiter performance. A particularly sophisticated form is the behaviorally anchored rating scale (Borman, Hough, & Dunnette, 1976), which permits specific component behaviors of recruiter performance to be rated and tends to eliminate many of the biases and sources of unreliability found in global ratings. Because the scale is constructed in terms of specific behavioral components, it is useful for counseling, developing training content, and establishing improved work procedures. Such a scale describes how a good (or bad) recruiter should behave but, without additional evidence, there is no index of how effective such behavior is in acquiring recruits.

At the other extreme from measures based solely on human judgment are those based solely on recruiter productivity, such as the number of recruits produced by a canvasser during a particular time period. However, such measures do not differentiate qualitative differences in production and, usually, ignore the "fertility" or inherent potential of a particular

recruiter's territory. When the qualitative characteristics of recruits are considered, the purpose is, more often than not, to fill certain procurement requirements rather than to pursue a better measure of productivity. The Army and Air Force have elaborate measures of this sort. The Navy attempted to follow these examples but curtailed the program because of difficulties encountered in arriving at equitable weights for various categories of recruits. Thus, a measure of recruiter performance or effectiveness based on productivity must still wrestle with the questions of what is to be counted and how quality is to be weighted. Nevertheless, management and the decision maker will insist that a measure of recruiter effectiveness must include an accounting of contributions to the organization's "bottom line."

As mentioned, a measure of productivity alone ignores the conditions under which a recruiter must produce. There is, first, the matter of managerial policy that may affect the activity and effort of the recruiter. Goal setting--commonly referred to as quotas--has a profound effect on recruiting, especially when the goal is a lid on production. Other policy consequences may arise when, by a point system or by sheer insistence, differential priorities are placed on recruits in various categories. Another effect of management is the ratio of recruiters to potential enlistees in a particular area, which management manipulates by assigning or removing recruiters, or setting or changing territorial boundaries. Such actions must be considered in addition to a simple counting of new enlistees or "contracts" signed.

Finally, but most important, all territories do not have the same potential for generating enlistees. A straight count of new accessions without consideration of this factor will not provide a fair accounting of recruiter effectiveness. Thus, when all of these factors are considered, the ideal measure of recruiter effectiveness would appear to be a ratio of what the recruiter produces to what he should have produced, with due consideration for managerial policy. Such a measure would be similar to the following recruiter effectiveness equation described by Cravens and Woodruff (1973) and Cravens, Woodruff, and Stamper (1972):

$$\text{RECRUITER EFFECTIVENESS} = \frac{\text{RECRUITER PRODUCTION}}{\text{EXPECTED PRODUCTION}}$$

Dynamics of Navy Recruiting

It was stated at the outset that the measure of recruiter effectiveness must be consistent with the dynamics of the situation in which recruiting takes place. Dynamics, in this sense, refers to the interaction of managerial policy with the inherent potential of an area for providing enlistees. (The managerial policy variables that play the greatest role can be classified under two headings: goal setting and the allocation of resources.) If this interaction is ignored, then a biased or erroneous appraisal of territorial potential may result.

For example, a student (Sullivan, Note 1) wanted to develop territorial predictors of Marine Corps recruiting substation (RSS) productivity. (A Marine Corps RSS is the equivalent of a Navy or Army recruiting station and represents the first level of aggregation above the individual

recruiter.) The study encompassed the 12th Marine Corps District RSSs located in California. (The predictor candidates are described later in this study.) The production data were contracts signed at each RSS during calendar year 1975. Sullivan was achieving considerable success in finding predictors of RSS productivity when his attention was called to the fact that he had not accounted for the resources at each RSS. Obviously, the more recruiters there are at an RSS, the greater the output. He put resources into his equations and found that he needed nothing else to predict production.

Using only 12th Marine Corps District data, contracts signed (production) can be predicted almost perfectly by recruiter man-months: The first order correlation is .99, 1.00 being a perfectly predictable relationship. The correlation between production and the number of recruiters is .98. Using Marine Corps data, the correlations are .95 for recruiter man-months and .96 for the number of recruiters. All figures are Pearson $\underline{r}$.

An explanation of how such a situation can materialize requires a more detailed examination of managerial policy in the allocation of goals and resources. A schematic of this process is given in Figure 1, which uses the Navy recruiting hierarchy as a model. Headquarters, Navy Recruiting Command (NRC), receives its goals and resources from the Chief of Naval Personnel (CNP), and it distributes them to the Navy Recruiting Areas (NRA) on some equitable basis, which turns out to be a population measure of the area. Each NRA, in turn, allocates its resources and goals in a similar manner, and the process is repeated at the Navy Recruiting District (NRD) level. Thus, each Navy Recruiting Station receives resources and goals proportionate to its population. Then the output of each NRS is compared with its tasking, and the comparison process is repeated up the hierarchy. On the basis of this feedback, resources and goals are adjusted cybernetically until every component in the system can make its goals with approximately the same effort. This ensures a very close correlation between resources and output, especially when outputs equal goals or are a constant proportion of goals throughout the system.

There is also a close correlation between output and demographics, but the strength of this relationship depends, in part, upon the adjustments that have been made in resources and goals. The danger in studies that predict aggregated production on the basis of population characteristics is that they may actually be predicting managerial policy that strives to ensure that the production per unit of the population is more or less constant throughout the command. This is, of course, an oversimplification of the situation, since management considers other factors in assigning its resources and in making its taskings. Nevertheless, in attempting to create a measure of recruiter effectiveness, such pitfalls can be avoided by using individual productivity data rather than aggregated data.

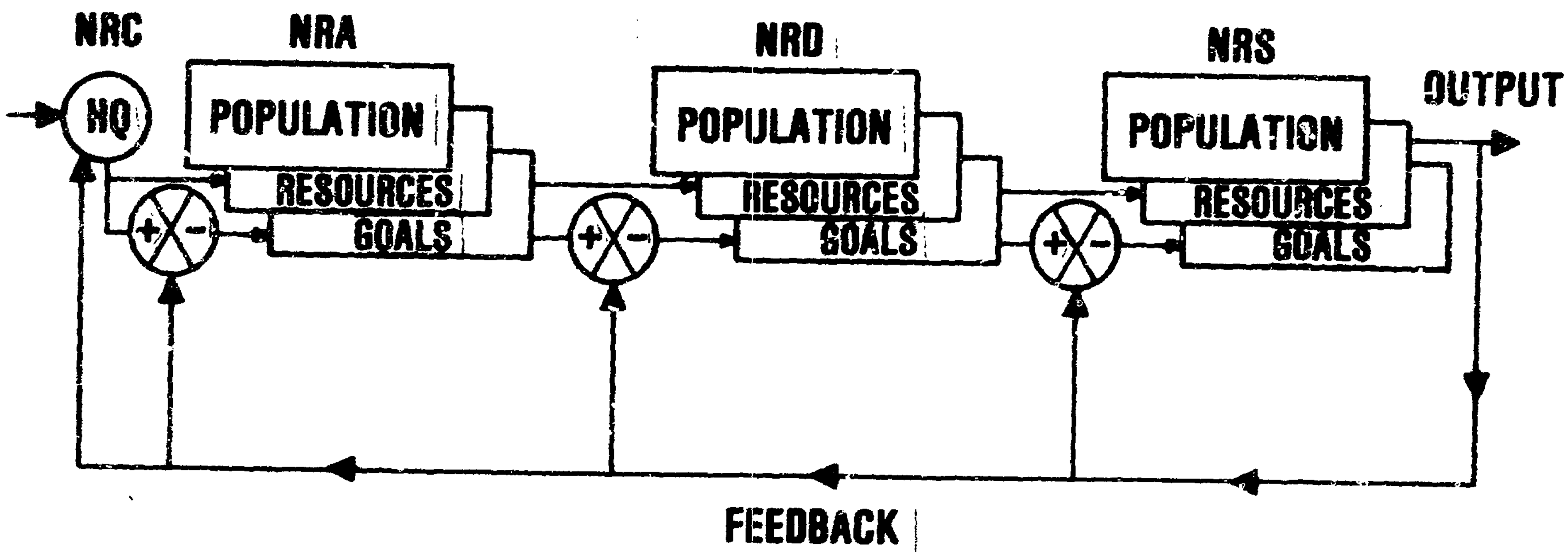

Figure 1. Cybernetics of Navy recruiting.

Consider again the number of recruiters at a station. When individual rather than aggregated or averaged productivity is being predicted, this variable reflects station size—a product of managerial policy. The question is this: Does the size of the station in which recruiters work make a difference in their individual production?

The Meaning of Individual Productivity

Research using some individual measure as the dependent variable is drastically different from research using aggregated or averaged measures, due to the effect of individual differences—the greatest source of variability. One common approach is to break individual differences down into measurable and predictable components. In the context of recruiter productivity, the researcher using this approach would inquire into the personal characteristics that distinguish productive from nonproductive recruiters. It should be emphasized here that this is not the purpose of this research, and no such attempts will be made.

A researcher who is not interested in individual differences per se might take the best available measures to identify and control for individual differences and put them on the input side of his equations. For example, Cravens and Woodruff (1973) and Cravens et al. (1972) used salesmen's experience and their motivation and effort as part of the input variables for calculating sales territory "benchmarks." Experience was defined as "length of time with the company," an objective measure, while motivation and effort were rated by field sales managers. A survey by NRC of NRD commanding officers suggested that the relationship between time with the unit and productivity was not a linear function and that it was characterized by a long plateau period. Moreover, there do not seem to be any "off the shelf" objective indices of recruiter motivation and effort that could be used in the manner suggested by Cravens and his colleagues. Accordingly, no individual difference variables will be used in this study to determine territorial potential. The most telling argument for this decision is that the measure of territorial potential required for a generalized measure of recruiter effectiveness should be independent of recruiter differences and managerial practices; that is, it should represent the inherent potential of the territory itself.

This leaves the strategy that will be used in this research: Individual differences will simply be considered as error or noise on the output or dependent variable side of equations attempting to identify territorial predictors of productivity. The rationale for this can be seen in Figure 2, which depicts the sources or components of variability in recruiter production; that is, if we ask why recruiter A at station X produces more than recruiter B at station Y, Figure 2 indicates that 30 percent of it is due to motivation, 30 percent is due to differences in territorial potential, and so on. The percentages shown are hypothetical and somewhat arbitrary, but they are conservative estimates with respect to the variables that represent the contribution of individual differences. The judgment of "conservative" is based on interviews with knowledgeable recruiting personnel, who said they would put a greater emphasis on individual effort. The differences in productivity due to individual differences reflect variations in motivation, aptitude, and skill. Motivation reflects the recruiter's

efforts, aptitude refers to those enduring characteristics of the individual that are particularly suited (or unsuited) to the job, and skill is the result of training and experience. Chance represents the influence of unique events, such as a natural catastrophe in the recruiter's area, a breakdown of the recruiting vehicle, or a birth in the recruiter's family. The remaining portion of differences in productivity among recruiters is attributable to territorial potential and managerial policy.

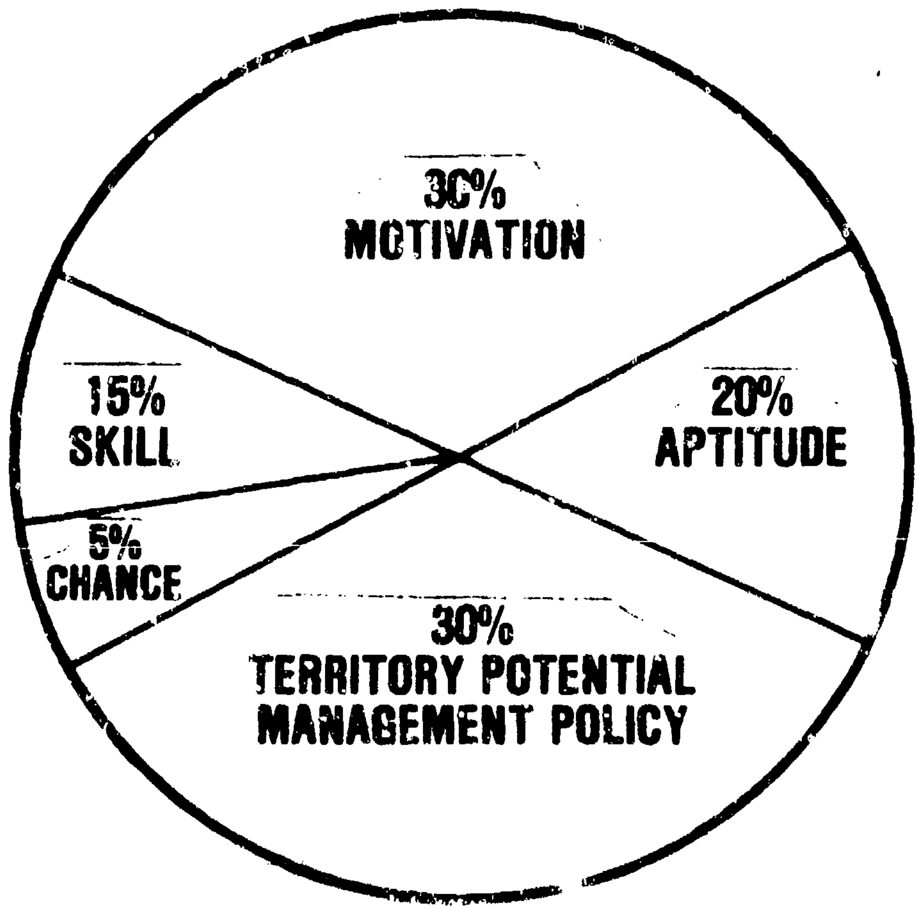

Figure 2. Sources of variability in production among recruiters.

Not shown in the diagram is interrecruiter variation due to measurement error. Experienced researchers who have worked extensively with the accession tapes that are based on data assembled at the Armed Forces Entrance and Examining Stations (AFEES) and stored at the U.S. Army Recruiting Command (USAREC) say that there is as much as 20 to 30 percent error in the data. Some of this is intentional; for example, recruiters may pass their production around to other recruiters, or one recruiter in the district headquarters may get credit for drawn-out waiver cases. Unintentional

errors are of a wide variety, but one common mistake is the assignment of incorrect social security numbers (either the recruit's or the recruiter's) to individual records. Such an error will later make it impossible to match the recruit with the recruiter. Generally, this error will tend to lower the production figures of individual recruiters and, in doing so, will minimize the differences in productivity. On the other hand, clerical errors will add to the uncertainty of the actual difference. Because such error is random, it will not be possible to predict measurement error in the productivity of an individual recruiter.

The main point is that only a very modest portion of the variability in individual recruiter production will be predictable from the characteristics of the recruiter's territory. In attempting to determine which territorial variables contribute to recruiter productivity, and to what degree they do so, the portion due to individual differences is all error and is unpredictable. On the other hand, the portion due to individual differences enters the measure in the upper portion of the recruiter effectiveness equation, categorized as actual productivity; that is, the recruiter will be effective to the degree that the portion of actual production that is due to individual differences equals or exceeds that which would be expected due to territorial potential alone (the lower portion of the equation). Thus, as stated at the outset, the ability, skill, and effort of the recruiter will be adequately reflected in the effectiveness measure.

Measurement of Territorial Potential

The primary problem in determining what a recruiter should produce is to identify territorial variables that predict differences in individual productivity to the extent that these differences can be predicted on the basis of territorial potential alone. Studies using a macro approach—i.e., at highly aggregated levels—have employed available demographic and socioeconomic data to measure the enlistment potential of a territory, a large region, or the entire universe in which Navy recruiting is conducted. The same approach cannot be used when the territory is at the level of a recruiting station or the individual recruiter—a distinctly micro level of analysis.

The primary reason why available statistics cannot be used is that they are collected in geographic units that cannot be mapped on the area of a recruiting station without making gross, and probably inappropriate, assumptions. For example, with respect to the census, Fechter (1971) showed that age and race statistics can be obtained at a level comparable to that involving the assignment of individual recruiters, but different sources of data will be required for other desirable categories of data. Another reason why the available statistics are not usable is that they are usually old and, therefore, of doubtful appropriateness. At a macro level, the census, for example, can be updated by using birth and death trends and population migration trends. But when the area of concern is as small as that of a recruiter's territory, such updating is of even more doubtful appropriateness than the assumptions involved in the mapping problem. An alternative might be to search for and to obtain similar data at the local level. In this case, however, many different sources will have to be contacted and the

reliability and validity of the information would be very questionable. For example, the same statistic obtained from the local chamber of commerce, labor unions, or a citizen's committee would not be likely to agree. Thus, the effort required and the accuracy of the data do not warrant this approach.

There is one source of data that is sufficiently broad and accessible to overcome most of these objections to the use of archival material: educational data collected at the state level. The unit of collection goes down to that of the individual school district, which is considerably smaller than a recruiting station area and will, therefore, facilitate mapping of the data on recruiting stations. The data are current because they are collected annually for budgeting decisions, and are easily available because of the taxes they engender. The variety of categories in which statistics are provided is so broad that single categories or combinations can be found to duplicate the demographic and socioeconomic catagories used in large-scale research. The most cogent argument for using them is that the assignment and utilization of individual recruiters is based on educational data for the very same reasons that have been put forth for their use in this research. The statistic that is probably the most widely used is the number of male high school graduates (HSG). For example, the San Francisco NRD was using a figure of one recruiter per 300 HSG as a guide; the 12th Marine Corps District was using one per 500. These considerations argue very strongly for the use of educational statistics at the school district level as the basis for quantifying territorial potential in generating enlistments.

METHOD

Period of Study

The recruiting production data used in this study cover the period from June to October 1974. This period was selected because previous research (Arima, 1976) and consultations with the Research Division of the Naval Recruiting Command (NRC) indicated that goals were being met with great difficulty or not at all. The purpose of selecting such a period was to ensure that goal setting was not dictating production. The difficulty of attaining goals was related to the command as a whole and, without a doubt, there were elements of the command that continued to reach their goals and even made up for deficiencies elsewhere. A characteristic of such goal making during this period was a drop in recruit quality. Accordingly, to ensure that goal attainment was not a curb on production, a quality measure could be used, to adjust the total numbers of accessions. The findings of this study should be interpreted in the context of the period selected for study.

The Recruiter Sample

All of the 268 recruiters used in this study were from Navy Recruiting Stations (NRSs) in California. The distribution of NRSs and recruiters by NRD is shown in Table 1.

Table 1

Distribution of Recruiters by Navy Recruiting District and Navy Recruiting Station

NRD[a]	NRSs	Recruiters
San Francisco	47	114
Los Angeles	45	107
San Diego	16	47
Total	108	268

[a]Although the San Diego NRD was part of the Los Angeles NRD at the time of the study, it was treated separately here because it was administered by a separate headquarters in San Diego until it became a separate district in January 1975. The NRS at Bakersfield was part of the Los Angeles NRD at the time of the study, but it was subsequently shifted to the San Francisco NRD. For reasons of convenience in checking rosters and for other data processing considerations, it was considered as part of the San Francisco NRD throughout this analysis.

While the intent of the study was to include all recruiters who served in California during the survey period, certain data-handling practices at NRC and certain inconsistencies in the recruiter data necessitated reformulation of the sample selection criteria. The primary problem was that it was not possible to be sure when a recruiter was assigned to or left a particular station. The criterion that was finally adopted was assignment to just one California NRS for the entire study period. The sample selection was initially made on the basis of (1) NRC-supplied recruiter data and (2) telephone books for July 1974 published by the Los Angeles and San Francisco NRDs. Rosters were made up by the NRSs in the three NRDs and each name was checked by NRD personnel who were familiar with recruiter assignments during the survey period. Omissions were also noted by the NRD personnel and were entered on the rosters. The sample of recruiters who met the criterion were almost all experienced recruiters with at least a year of experience. Most of those who were on duty during the Selective Service period were still on duty, and the large increment of recruiters in anticipation of the establishment of the All-Volunteer Force (AVF) in July 1973 made up the bulk of recruiters in this study.

One additional screen was used: When data from the accession tape were being entered for analysis, any recruiter whose Social Security Number (SSN) did not show up (i.e., who had no accessions to his credit for that period) was dropped. While this practice might have dropped recruiters whose efforts yielded no accessions during the period, it also guarded against inadvertently including recruiters who were not on production duty—for example, zone supervisors.

Production Categories

The accession data that were obtained from NRC were aggregated into categories that permitted meaningful analyses. The eight accession categories and one attrition category, along with the data processing codes used in this study, were as follows:

ACQ01	Chargeables (QUEBEC—first-term, male accessions).
ACQ02	Nonchargeables (Various reenlistment categories).
ACQ03	Female accessions.
SPE01	School guarantee/OccSpec program.
SPE02	Advanced electronics and nuclear field.
ED12	$\geq$ 12 years of education (HSG).
AFQT49	$\geq$ 49th percentile (Category Upper III +).
NBLACK	Number of Black minority accessions.
NATTRITE	Number of attritions from recruit training centers.

The three "ACQ" categories are mutually exclusive and essentially comprise a recruiter's total production. The two "SPE" categories represent the backbone of the enlistment program—the individuals going into specialist categories that are essential for maintaining and operating the combat elements of the Navy. The ED12 category identifies the high school graduates (HSG), who are prized by the Navy because of their traditionally better disciplinary and service completion records. The AFQT49 category breaks out the higher mental categories, defined as "Upper III" and above on the Armed Forces Qualification Test (AFQT). The only ethnic category used was the number of Blacks recruited. The accession race code had been requested of NRC, but it did not break out the Spanish-surname minority; the ethnic background code would have been the proper category. In addition, a tape was obtained from NRC that showed all attritions from recruit training centers (RTCs) during FY 1974 and the first half of FY 1975 (NATTRITE). Any attrition—regardless of cause—was counted as a loss to the recruiter who had sent him to RTC.

Using the basic accession categories, several composite measures were constructed that were more representative of recruiters' overall production. These composite measures, along with their data processing codes, are as follows:

TOTAL	ACQ01 + ACQ02 + ACQ03
NET	TOTAL - NATTRITE
NETPLUS	ACQ01 + SPE01 + SPE02 - NATTRITE
EDAFQT	$\geq$ 12 years education and $\geq$ 49th percentile (AFQT)

As explained above, the three "ACQ" categories were combined into a total production figure for the recruiter. The NET production was defined, as shown, by subtracting attrition from total production. The NETPLUS measure was created to represent quantity and quality in a recruiter's production. The quantity of greatest concern is the new accessions, or QUEBEC recruits, category ACQ01. To this were added the portion entering the specialist fields—SPE01 and SPE02—which added a quality dimension to NETPLUS. It should be noted, however, that most of a recruiter's SPE01 and SPE02 production were also ACQ01 acquisitions. In these cases, NETPLUS was giving double credit for new enlistees entering specialist training. Subtracting attritions from this sum also added a quality dimension. The EDAFQT composite was created to reflect Recruiting Category A recruits, who are high school graduates in the upper half of the AFQT distribution.

Recruiting Station Size

Since it was not possible to describe a recruiting station used in this study by recruiter man-months or any other empirical measure of recruiter strength, a different procedure was adopted. By managerial policy, each NRS is designated as an N-man station, and every attempt is made to maintain it at that strength. Another study (Corsey, 1975) used the designated station strength as a classification variable. All indications were that the average strength over a period of time equalled the designated strength. Since the

period of Corsey's study was the same, the same station sizes were used for this research and were checked by each of the three NRDs for possible discrepancies. The variable was designated NRCTR, the number of recruiters at a station.

Educational Data

The categories of educational data, along with their data processing codes, are listed on the following page.

EDUCATIONAL DATA

Code	Category
	Enrollment Data
ENROL	Total enrollment in grades 10 through 12.
GRADM, GRADF	Male and female high school graduates, June 1973.
VOCEDM, VOCEDF	Vocational class enrollments, male and female.
GWRKM, GWRKF	General work experience enrollments, male and female.
VOCMM	Vocational male minority enrollments.
	Financial Data
ADA2	Average daily attendance in the second period.
ASSVAL	Assessed valuation per ADA2.
GPTAX	General purpose tax rate.
PLOCIN	Percent of financing from local income.
FEDIN1	Federal income under PL81-874 for impact of military dependents.
FEDIN2	Total income from Federal sources.
PUTRANS	Expenditure for pupil transportation.
CUREXP	Total current expenditures (operating expenses).
TCHSAL	Average high school teacher salary in district.
	Minority Data
MINORITY	Total minority percent of enrollment
INDIAN	Percent of enrollment that is American Indian.
ASIAN	Percent of enrollment that is of Asian extraction.
BLACK	Percent of enrollment that is Black.
SPANISH	Percent of enrollment with Spanish surnames.
	Achievement Data
READG	Mean 12th grade reading achievement in district.
WRITG	Mean 12th grade writing achievement in district.
SPELG	Mean 12th grade spelling achievement in district.
MATH	Mean 12th grade mathematics achievement in district.
	Miscellaneous Data
NHISCH	Number of high schools in area of recruiting station.

Enrollment Data

The enrollment data were obtained in several categories because they represented different aspects of a school district's student population. The general enrollment data (ENROL, GRADM, GRADF) came from the apportionment staff of the State Department of Education, while the vocational information (VOCEDM, VOCEDF) came from the vocational education staff. The latter is in terms of enrollments in vocational classes, and emphasizes the size, if not the variety, of the vocational education program. It would seem to be most appropriate to get information with respect to vocational enrollments, since many recruiters believe that schools with good vocational programs are prime sources of quality recruits. The general work experience categories (GWRKM, GWEKF) represent a program that permits full-time students to work part time and receive credit for their work experience. Larger values for this variable would indicate a lower socioeconomic status of the community. The VOCMM category refers to the number of male minority enrollments in the vocational education program.

Financial Data

The financial data were obtained from two annual publications: (1) a financial report of school districts, published by the Department of Education, and (2) a detailed report showing sources of revenue and classes of expenditures for every school district, published by the State Controller. Their implications for this study are described below:

ADA2. While average daily attendance in the second period is not a financial statistic per se, it is used as a normalizing factor and as a basis for the apportionment of funds. (The "second period" refers to a division of the school year in which the average daily attendance is relatively stable and provides a representative base for determining a school district's average daily attendance.)

ASSVAL. The assessed value of a school district's property is reported in terms of its relationship to the average daily attendance. Thus, ASSVAL is the assessed value divided by the ADA2 for a particular school district. While it is generally representative of a community's socioeconomic status, ASSVAL also tends to reflect an area's density. It is largest in the state's mountainous areas, especially so in the timber regions; the land holdings are large and the ADA2 is small.

GPTAX. The general purpose tax rate reflects the need of a school district to tax at a higher rate to meet the operating expenses of the school system and, as such, it is a scaling factor for poorer districts.

PLOCIN. The percent of school district income from local sources reflects the wealth of a community in that the other sources of income—state and federal assistance—are relatively fixed within specified programs. Thus, local income is a primary source for additional funds, and PLOCIN will tend to scale the wealth of communities with above-average socioeconomic status.

FEDIN1. This source of funds provides the impact compensation that a school district receives for the presence of a military base in the area; the amount per student is larger if the student's family resides on the military reservation. Many researchers have sought some way of measuring a base's impact on recruiting success, but there have been no good, operational definitions of the concept. This financial category provides such a definition.

FEDIN2. This category of federal support represents all federal income (including that in FEDIN1) and should reflect the extent to which conditions in the community warrant federal programs.

PUTRANS. The amount of money a school district expends on pupil transportation was included as another measure of density, although in isolated cases, it reflects busing for racial integration. By itself, it also reflects the wealth of a community, since those with more funds would be expected to spend more per pupil mile.

CUREXP. This category reflects all expenditures in a school district for actually operating the system, as opposed to, say, expenditures for captial investments. It includes most of the other financial variables and, with ADA2, indicates the size or magnitude of the educational effort in the various school districts.

TCHSAL. The average high school teacher's salary for each school district was obtained from a publication of the California Agency for Research in Education (1974). This statistic was particularly desirable since an examination of publications of the Department of Health, Education, and Welfare showed that teacher salaries reflect relative wage rates in the country on a temporal basis. While it does not necessarily follow that it would do so on a geographic basis, and no doubt there are exceptions at the local level, it was used to indicate the relative, prevailing wage rates among the communities constituting the school districts in this study.

Other Educational Data

The achievement data were obtained from the results of a statewide testing program conducted in the 1974-75 school year. As shown in the list of educational data categories (p. 13), the scores are mean achievement scores for each test in a particular school district. A tape was obtained from the Research and Development Bureau of the California Department of Education showing these scores for each high school and for every school district.

The minority data were obtained for every high school in the state as a result of a one-time survey conducted in 1973. The data used for this study were in the form of percentages.

One other educational characteristic was added to the list: the number of high schools within each NRS area.

The information above was obtained for nearly all California school districts. Data were not available in some categories (mostly enrollments) because of reporting problems or because some school districts were new. Some of the missing information was obtained by telephone. For some small, isolated school districts, the mean of school districts contiguous with them was assigned for the missing variables. Such cases were rare and, as it turned out, their data were not always required; that is, not all school districts entered the study because some were serviced by NRSs in neighboring states. This was particularly true with school districts on the eastern slope of the Sierras. Also, some small, rural districts without high schools contracted space for their students in neighboring districts. Since the effect was minute in terms of the actual numbers of students, these districts were not included in the study, although their high school students were picked up in the districts where they attended school.

Transformation of Educational Data

One problem with the educational data was the presence of two different kinds of school districts. The 111 high school districts were well suited to the research, but the 237 unified school districts covered all grades from kindergarten through high school. There was no problem with respect to data that had been originally assembled by classes at the high school level or by high schools; these data included the enrollment, achievement, and minority categories. The problem arose in the important set of financial variables, which pertained to the entire school district whether it was high school or unified. The alternatives were (1) to analyze the two types of districts separately, a very undesirable choice, or (2) to find some way to equate the two. Not considering, for the time being, the statistical requirements, one way to do the latter was to use z scores or standardized scores, which are the result of taking deviations from the group mean and dividing them by the standard deviation. Thus, all standardized scores have a mean of zero and a standard deviation of one. However, to combine the scores from the unified and high school districts, it was necessary to ensure that their means were comparable with respect to the underlying variables of interest: the socioeconomic status of the district, the density of the district, and the impact of a military base on the district. A different way of formulating the same question would be to ask if the means and standard deviations of the two types of districts would be the same if the unified districts could be recalculated on the same basis as the high school districts.

Fortunately, TCHSAL pertained only to high school teachers, regardless of the type of district. If the two types of school districts did not differ materially on this variable, and if the other financial variables were at least moderately correlated with it, then there would be some basis for combining the districts for analysis. Accordingly, a t test was conducted to determine whether there was a difference in high school teacher salaries in the unified and high school districts. The results, shown in Table 2, indicated that there was little difference. It will be shown later that TCHSAL was moderately correlated with all of the other financial variables, with the correlation coefficient ranging from .26 with FLOCIN to as high as .69 with CUREXP. These findings warranted the combination of the two types of school districts with respect to the financial variables after z scores had been computed; the codes for these converted variables begin with the letter "Z." TCHSAL did not require conversion. A constant of 10 was added to the z scores to eliminate negative scores.

Table 2

High School Teacher Salaries in Unified and High School Districts

Statistic	District Type: Unified	High School
Mean	$12,506	$12,729
Standard deviation	1,451	1,541
N of districts	249	115

Note. The t statistic for difference in means was 1.34, $p = .182$. The number of districts is that used for the U.S. Marine Corps study (Sullivan, Note 1).

Primarily to meet the requirement that a variable be normally distributed before it is transformed to standardized scores, and also because of the possibility that some of the variables might be used as dependent variables or in variance analyses, an attempt was made to ensure that all of the education variables were approximately normally distributed. The criterion that was used was that the skewness (asymmetry), and kurtosis (peakedness or flatness) not exceed an absolute value of 1.0, an insignificant deviation from the normal curve. This criterion was met, with only minor discrepancies, by resorting to a natural logarithm transformation of variables, when necessary. The achievement variables, GPTAX, PLOCIN, and TCHSAL, did not require transformation. All of the other variables were transformed to natural logarithms.

Aggregation and Merging of Files

Three files had to be combined to permit the contemplated analyses: the education file for the 347 school districts, a file of 108 recruiting stations showing the rated number of recruiters and the parent NRDs, and a file of 268 recruiters showing their production and attrition data and their NRSs. The most difficult problem was to map the school districts on the NRSs. This was done by obtaining from each NRD a list of high schools assigned to each NRS. Then, using the California Directory of Schools, the district of each high school was determined. When all of the high schools of a particular district were assigned to a single NRS there was no problem; the school district data were tagged with that NRS. When the school districts fell into two or more NRS areas, a proportionality factor was calculated based on the total enrollment of the high schools belonging to the school district in each NRS. For example, if the high schools in a particular school district showed up in two NRS areas, with 40 percent of the total enrollment in one NRS area and 60 percent in the other, then these percentages were the proportionality factor used to partition the school district. Eventually, there were 82 "pieces" of school districts that fell to different NRSs, with the Los Angeles school district accounting for 16 of them. The others were mostly cases of a school district being represented at two NRSs. Thus, it can be seen that only a small number

(31) of the 347 school districts had to be apportioned to different NRSs. Of these 31 districts, 15 were high school and 16, unified districts. The value of each variable for each NRS of a particular school district was the variable multiplied by the proportionality factor.

When the school districts, or portions of them, had been mapped on the NRSs, the quantitative variables were summed and the qualitative variables (achievement data, minority data, and PLOCIN) were averaged for each NRS, resulting in a single value for each variable for the NRS. When this had been done, the NRS number was used to merge the station data with the recruiter file. Accordingly, when there were two or more recruiters at a particular NRS, each recruiter was assigned the same educational data.

This completed the file manipulations, and the single recruiter file with values of all variables calculated for each recruiter constituted the basis for analysis.

RESULTS

Recruiter Production Measures

The production data over all recruiters are shown in Table 3 for each of the production categories and composite measures. In addition to the means and standard deviations, the kurtosis and skew associated with each measure are also shown. It was not necessary to transform some of the more skewed or flat distributions, since those that were contemplated for use in further analyses—ACQ01 and the composite measures—had skew values well within the previously used criterion (equal to or less than 1). The attrition rate for total accessions was 10.22 percent. The Black accessions accounted for 9.23 percent of the new accessions, which was very close to the national goal of 10 percent. The Class A recruits (category EDAFQT) accounted for just half of the new accessions (50.62 percent). Thus, it would appear that it was very difficult to recruit persons who met <u>both</u> educational (ED12) and mental qualifications (AFQT49) at the desired level. The percentage is slightly inflated, since new female accessions, who met both criteria in most cases, were included in the EDAFQT count but not in the ACQ01 count. Appendix A shows the intercorrelations among the production measures and their correlations with the educational variables and the NRCTR (number of recruiters) variable.

Table 4 shows the intercorrelations among the production variables that are considered more important from the standpoint of quality and quantity of recruiter production. ACQ01—new male USN accessions—is the quantitative measure of primary importance. The SPE01 category emphasizes the backbone of the Navy's enlisted program—those who enter the specialist fields necessary to maintain and operate the complex modern Navy. As stated, EDAFQT is the primary quality indicator for incoming personnel. The total quantitative output of the recruiter is reflected in NET, and NETPLUS is a combination of quantitative and qualitative indicators. While the intercorrelations of the first four measures in Table 4 are not especially high (except for ACQ01 with NET), it is obvious that NETPLUS—due probably to the overlap—correlates well with all of the measures.[1] Early in this report, it was stated that even if actual production is used in a measure of recruiter effectiveness, there still remained the problem of how production should be measured. It would seem that the NETPLUS measure is an admirable candidate for a production measure because it reflects well the production of a recruiter in both quality and quantity. Accordingly, NETPLUS will play a central role in the analyses to follow.

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[1]The correlation of the three composite variables—NET, EDAFQT, and NETPLUS—with each of the educational variables and NRCTR is shown in Appendix B with the enrollment variables adjusted for (divided by) the number of recruiters at a station (NRCTR) and certain of the financial, school district variables adjusted for (divided by) the average daily attendance (ZASSVAL).

Table 3

Recruiter Production Data

Variable[a]	Mean	SD	Kurtosis	Skew
Production Categories				
ACQO1	14.381	7.784	1.267	.811
ACQO2	.978	1.275	7.042	2.117
ACQO3	.485	.985	17.519	3.507
SPEO1	5.422	3.797	2.285	1.231
SPEO2	1.552	1.532	.847	1.086
ED12	12.877	6.498	.809	.571
AFQT49	8.896	5.121	1.393	.836
NBLACK	1.328	3.092	19.546	4.095
NATTRITE	1.619	1.789	6.491	2.063
Composite Measures				
TOTAL	15.843	8.149	1.132	.700
NET	14.224	7.178	.906	.610
EDAFQT	7.280	4.188	.402	.508
NETPLUS	19.735	10.414	1.534	.837

[a]See pages 10 and 11 for explanation of the variable codes.

Table 4

Relationships Among Accession Variables

Variables	ACQ01	SPE01	EDAFQT	NET	NETPLUS
ACQ01	1.000	.654	.768	.955	.938
SPE01		1.000	.754	.637	.826
EDAFQT			1.000	.762	.864
NET				1.000	.927
NETPLUS					1.000

Note. All figures are Pearson product moment correlations.

Major Sources of Variability in Recruiter Productivity

The possible sources of production variation production among recruiters were discussed in the Introduction, and the relative contribution of each component was hypothesized and depicted in Figure 2. The individual recruiter production data made it possible to estimate the relative contributions of these sources on an empirical basis for the sample of 268 recruiters. The source of management policy could be the three Navy recruiting districts (NRDs), since the NRD is the operating command in the field. Management policy determines productivity to the extent that productivity varies significantly across the NRDs. For example, a study of Army recruiters (Brown, Wood, & Harris, 1975) found that the average production per recruiter in a recruiter's district recruiting command (comparable to an NRD) was the only significant environmental predictor of individual production.

The territorial potential source of variation in recruiter productivity could now be assigned to differences in production among the recruiting stations (NRSs), since the educational data had been aggregated at the NRS level. Productivity at the NRS level was not, however, independent of the effects of policy at the NRD level. Accordingly, the variation in production among the NRSs was calculated within each NRD, making it a nested variable. Finally, the remaining variation in recruiter production could be attributed to differences among individual recruiters in their motivation, effort, aptitude, and skill, and to the chance factors of unpredictable origin.

To assess the contribution of these sources of variation in recruiter production, an analysis of variance was conducted with each of the composite measures—NETPLUS, EDAFQT, and NET—as the dependent variable. The NRDs and their NRSs were the independent variables. The results of these analyses are shown in Table 5. In each case, the NRDs were statistically highly significant and indicated that the NRDs did exert a differential effect on recruiter production. The means and standard deviations of individual recruiter production on these composite measures are shown in Table 6 for each NRD. Table 6 shows that the differences among the NRDs were due primarily to the San Francisco NRD, which was higher than the other districts on each of the composite measures. On the other hand, the production of the Los Angeles and San Diego NRDs was very similar, as one might expect, since San Diego was a part of the Los Angeles NRD at the time the data were collected.

Table 5 also shows that the NRSs did not exert a statistically significant effect at the 5 percent level. These results mean that, within each NRD, differences in production among recruiters was due just as much to the characteristics of individual recruiters and chance factors (the residual) as it was to differences in territorial potential at the recruiting stations. The percentage of variation attributable to the major sources of difference in productivity, calculated on the assumption that these differences are proportional to the sum of squares in Table 5, is shown in Table 7. Slightly over half of the variation in production among recruiters can be attributed to individual recruiter differences and to chance factors, considerably less than the 70 percent hypothesized in Figure 2. This implies that a greater portion of the variation could be attributed to management policy and territory potential, henceforth referred to as environmental variables to differentiate them from individual recruiter variables.[2]

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[2]The portion of variance due to environmental factors is biased upward by the fact that 18 of the 108 NRSs were represented in the analysis by just one recruiter. Since the sum of squares due to these stations was included in the NRS category, the stations did not contribute to the sum of squares for the residual. In this case, a correction for "shrinkage" could have been computed using an equation, such as that provided by McNemar (1969, p. 205). The correction was not made, however, because the shrinkage would have been small and because the equation could not be applied to the case of stepwise multiple regression, which was to be used to predict that portion of the variance due to the environmental variables. Had the environmental sum of squares been corrected for shrinkage and the stepwise multiple regression results not, then the portion of variance being predicted by the regression equation could have been biased upward.

Table 5

Analysis of Variance of NETPLUS, EDAFQT, and NET Productivity Measures By Navy Recruiting Districts and Navy Recruiting Stations

Source of Variation	Sums of Squares	d.f.	Mean Square	F	Significance
		NETPLUS			
NRD	2052.676	2	1026.338	11.299	.001
NRS (NRD)[a]	12372.182	105	117.830	1.297	n.s.
Residual	14532.912	160	90.831	---	---
TOTAL	28957.770	267	---	---	---
		EDAFQT			
NRD	153.159	2	76.579	4.802	.010
NRS (NRD)[a]	1976.912	105	18.828	1.181	n.s.
Residual	2551.824	160	15.949	---	---
TOTAL	4681.895	267	---	---	---
		NET			
NRD	567.141	2	283.570	6.243	.005
NRS (NRD)[a]	5921.453	105	56.395	1.242	n.s.
Residual	7267.644	160	45.423	---	---
TOTAL	13756.238	267	---	---	---

[a] NRS (NRD) signifies that the NRSs are nested within the NRDs.

Table 6

Recruiter Production on the Composite Measures
Within Navy Recruiting Districts

District	Statistic	NET	Composite Measures EDAFQT	Composite Measures NETPLUS
Los Angeles	Mean	13.449	6.654	17.963
	S.D.	6.595	3.912	8.582
San Francisco	Mean	15.825	8.158	22.863
	S.D.	7.597	4.491	11.546
San Diego	Mean	12.106	6.574	16.170
	S.D.	6.686	3.693	9.363

Table 7

Major Sources of Variation in Individual
Recruiter Productivity
(In Percent)

Source of Variation	Composite Production Measures NETPLUS	Composite Production Measures EDAFQT	Composite Production Measures NET
NRD	7.1	3.3	4.1
NRS	42.7	42.2	43.1
Residual	50.2	54.5	52.8
TOTAL	100.0	100.0	100.0

Environmental Determinants of Individual Recruiter Productivity

The next step in the analysis attempted to predict that portion of individual recruiter productivity due to the environmental variables. To do this, a stepwise, multiple regression procedure (Draper & Smith, 1966) was applied to the data using the program provided by the Statistical Package for the Social Sciences (SPSS) (Nile, Hull, Jenkins, Steinbrenner, & Bent, 1975). Two dummy variables were defined to incorporate the effects of the three NRDs into the analysis (see Table 8). The variable D1 had a value of 1 for any recruiter from the Los Angeles NRD and a value of 0 for all other recruiters in the sample. Similarly, variable D2 had a value of 1 for all recruiters in the San Diego NRD and a value of 0 for all other recruiters. In this scheme, the San Francisco NRD—chosen because it had the most recruiters—becomes a control factor that is common to both variables. The addition of these two dummy variables, along with NRCTR (the number of recruiters at an NRS), made up a subset of three variables that were representative of management policy and practices. These, along with the variables incorporating territory potential (i.e., the 27 school district variables listed on page 13) made up the predictor variables. The dependent variables were the composite production variables NETPLUS, EDAFQT, and NET.

Table 8

Values of Dummy Variables Incorporating the Effects of Navy Recruiting Districts for Regression Analysis

	Dummy Variables	
NRD	D1	D2
Los Angeles	1	0
San Diego	0	1
San Francisco	0	0

The results of the stepwise regression of the production variables on the predictor variables is shown in Table 9. While Draper and Smith (1966) recommend that variables falling below the entry criterion be discarded during the stepwise procedure, the SPSS program does not do this. While recalculating the *F* values for each variable already in the equation after the addition of a new variable, it retains all variables. This procedure does have the advantage of showing the "fate" of the variables to be discarded in the type of presentation employed in Table 9. For example, GRADF (the number of female high school graduates) was the first to enter the equation in two instances, but it eventually failed to make any unique contribution to the prediction equation after other variables had entered.

Table 9

Stepwise Regression of NETPLUS, EDAFQT, and NET on the Set of Predictor Variables

	NETPLUS (R^2 = .191, F = 8.779)			EDAFQT (R^2 = .144, F = 4.811)			NET (R^2 = .107, F = 6.254)		
Variable	Order[a]	Beta[b]	F[c]	Order[a]	Beta[b]	F[c]	Order[a]	Beta[b]	F[c]
D1	5	-.23074	10.029	6	-.15629	4.544			
D2	2	-.25303	15.298	5	-.16614	4.529	2	-.12050	3.541
NRCTR	7	-.10373	2.903	2	-.17810	6.540			
GRADF	1	.06752	0.329	1	.16349	.638			
VOCMM	3	.30620	11.171	4	.25984	5.71[illegible]	1	.26794	20.006
ASIAN							4	.15790	4.026
BLACK	4	-.21737	10.244	8	-.20342	2.435	5	-.13603	2.709
ZADA2	5	.21827	5.743	7	.05532	3.388			
ZGPTAX							3	-.08685	1.482
FEDIN2				9	.21014	2.563			
READG				3	.16149	3.749			

[a]"Order" refers to the sequence in which the variables were entered into the regression equation. The F-to-enter value, 1.5, was set relatively low because the effort was exploratory and because it could not be determined beforehand how many variables would enter the equation.

[b]"Beta" designates the standardized coefficients in the final regression equation and shows the relative contribution of each variable to the equation.

[c]The total d.f. in each equation is 267. All F statistics shown are terminal Fs, or the values for each variable after all qualified variables had been entered.

Each of the regression equations is statistically significant beyond the .001 level. The total degrees of freedom in each case was 267, which was divided between the predictor variables (one d.f. for each) and the residual (267 minus the number of variables in the equation). Statistical significance, however, does not necessarily imply practical significance. The R^2 values shown would be of very modest proportions if the task were to predict the total production of individual recruiters. In the model that is being pursued here, however, the environmental variables are being used to determine what the recruiter ought to have produced—the portion of the variation in productivity that is exclusive of the differences due to the personal characteristics of individual recruiters. As shown in Table 7, this portion is less than half of the total variance. Assuming that we do not initially know what a recruiter ought to produce, the NETPLUS equation reduces that uncertainty by 38 percent (19.1/49.8); the EDAFQT equation, by 32 percent (14.4/49.8); and the NET equation, by 23 percent (10.7/49.8). The NETPLUS equation, particularly, would have practical value in expressing what a recruiter could be expected to produce. The other equations do so to a slightly lesser degree. These results again verify the utility of NETPLUS as a measure of recruiter productivity in that it is the most responsive to factors in the recruiter's environment and is the most predictable.

The equations in Table 9 are, however, exploratory and contain variables that do not contribute significantly to the equations. There is some problem in determining which variables to eliminate because, as explained above, all variables are still in the equation. Thus, if those that are not significant at this stage are removed, some that are allowed to remain in the new equation may now turn out to be nonsignificant. Nevertheless, knowing approximately how many variables would be in the equations makes it possible to redo the stepwise regression using a higher F value for entering the equation to result in a regression equation at a predictable significance level. Accordingly, the equations were rerun with an F-to-enter of 2.70, which is at approximately the .10 level for the individual variable and at the .05 level for an equation with three variables and total d.f. of 267. The results of this procedure are shown in Table 10. The variables GRADF, ASIN, and FEDIN2 no longer appear, and each equation is reduced by two or more variables. The R2 values have declined slightly but, in every case, the F values are considerably higher, permitting greater confidence in the application of these equations. The original 30 predictor variables have been reduced to 8. All three of the management policy variables are still in the equation, with the dummy variable, D2, appearing in all three equations. The only other variable with a similarly pervasive influence is VOCMM, which appears in every equation and has the greatest effect.

Table 10

Regression Equations for Predicting NETPLUS, EDAFQT, and NET Production of Individual Recruiters

Variable	NETPLUS (R^2 = .182, F = 11.662)		EDAFQT (R^2 = .119, F = 7.069)		NET (R^2 = .091, F = 8.826)	
	Beta	F	Beta	F	Beta	F
D1	-.21031	8.973	-.11461	3.082		
D2	-.26378	18.271	-.14441	5.303	-.17283	8.479
NRCTR			-.14823	6.288		
VOCMM	.33987	30.150	.26216	17.225	.24709	17.529
BLACK	-.23367	13.142				
ZADA2	.16017	4.506				
ZGPTAX					-.10097	2.914
READG			.19418	9.859		

Note. The total d.f. is 267 in each case.

Assessment of Individual Recruiter Effectiveness

Completion of the regression equations in Table 10 made it possible to apply the recruiter effectiveness equation in the Introduction. The variable NETPLUS was used for the effectiveness assessment because it had been shown to represent of the recruiter's overall productivity in both quality and quantity and was the measure most predictable from and sensitive to the recruiter's operating environment. Using the NETPLUS regression equation in its unstandardized form, a value called EXPECTED was calculated for each recruiter. The effectiveness measure, called EFFECTIV, was then calculated for each recruiter by dividing actual NETPLUS production by EXPECTED. The EXPECTED, NETPLUS, and EFFECTIV measures are shown for each recruiter in Appendix C by NRS and NRD.

The means and standard deviations of EXPECTED and EFFECTIV for the NRDs are shown in Table 11. The means for EXPECTED should equal those for NETPLUS, except for rounding errors, and the mean for EFFECTIV should be 1.00. The standard deviation for EXPECTED is smaller than that for NETPLUS (see Table 6) because recruiters at each NRS were expected to produce the same number of accessions. The standard deviations for EFFECTIV are quite similar among the NRDs, indicating that the dispersion in actual production due to differences in the characteristics of individual recruiters was quite uniform around the expected mean production for each NRD.

Table 11

Values of EXPECTED and EFFECTIV by NRD

Variable	Mean	Standard Deviation
NRD Los Angeles		
EXPECTED	17.960	2.619
EFFECTIV	1.005	.479
NRD San Francisco		
EXPECTED	22.868	4.116
EFFECTIV	1.004	.492
NRD San Diego		
EXPECTED	16.170	3.344
EFFECTIV	.982	.489

Marketing and Management Aspects

Station Size

A variable representing management policy, in the sense that it was directly manipulable by the recruiting command, was NRCTR, the rated number of recruiters at an NRS. Since the data being examined were those of individual recruiters, the effect of NRCTR would be that of the station size on individual recruiter production. Earlier results (Table 9) showed that NRCTR had a significant negative effect on EDAFQT as a production measure and a marginally significant negative effect on NETPLUS. Accordingly, NRCTR was analyzed to determine its empirical relationships with the recruiting environment.

To perform this analysis, NRCTR was regressed on the environmental variables, including the dummy variables D1 and D2, using the stepwise regression procedure. The results are shown in Table 12. In addition to the categories of data shown in Tables 9 and 10, the column headed "Partial r at Entry" gives the partial correlation of the entering variable with NRCTR conditional on the variables already in the equation, and the column "F at Entry" provides an estimate of the significance of the variance additionally explained by the entering variable. The overall equation, using 9 variables to predict NRCTR for 268 cases, is statistically highly significant. Approximately 44 percent of the variation in station size is predicted by the equation.

Table 12

Stepwise Multiple Regression of NRCTR on the Environmental Variables

Variable[a]	Beta	Partial r at Entry	F at Entry	Terminal F
NHISCH	0.72660	.582	34.344	94.273
ZFEDIN2	0.27192	.444	65.167	4.941
SPELG	0.14106	.271	20.932	7.339
ZPUTRANS	-0.35682	-.178	8.655	16.901
ENROL	-1.27917	-.204	11.368	11.395
D2	0.18747	.164	7.206	13.314
VOCEDF	1.01359	.124	4.079	6.975
ZCUREXP	0.68475	.142	5.352	10.569
ZADA2	-0.33396	-.140	5.155	5.155

Note. $R^2 = .438$, d.f. = 9/258, and F = 22.302.

[a]Variables are listed in the order of entry.

Large stations that tend to have a negative effect on production are in locations with more high schools that have large budgets and that carry out much vocational education for females. They also tend to be in the San Diego NRD, and the students spell well. Population in the station area would be dense, as inferred from the low expenditures for pupil transportation in the context of large budgets. It should be noted that. as the stations increase in size, the total enrollment in the school systems and the average daily attendance is lower.

Vocational Education for Male Minority Students (VOCMM)

The variable VOCMM appeared to be the key component in each of the regression equations predicting the composite measures of production (Tables 9 and 10). However, in two of the three cases, it was not the first variable to enter the equations. From a marketing and management standpoint, it would be worthwhile to better understand the factors in the environment that are related to this variable. Accordingly, a similar approach was taken with VOCMM as was taken with NRCTR.

Table 13 shows the results of a stepwise multiple regression of VOCMM on the educational variables. As one would expect, its relationship with the other variables is complex; 14 variables enter the equation at a high level of significance. The close relationship with VOCEDF is due to the fact that, in this study, VOCEDF is the best single measure of total enrollments in vocational education in California. The variable of interest, VOCMM, is a subset of total vocational enrollments. Generally, VOCMM appears to be higher where there is a large vocational education program, a relatively greater proportion of minority students, and a moderately well-off community. It drops off in areas where there are many high schools and a large educational budget, and where many enrolled male students work instead of coming to school (GWRKM). It also drops off at the upper end of the socioeconomic continuum where the school districts are very well off, as witnessed by the negative weighting for ZPLOCIN (the percent of educational financing that comes from local sources).

The management variables—NRCTR and the dummy variables—were not included in the foregoing analysis to obtain a clearer picture of VOCMM as one of the territory potential variables. The first order correlation of NRCTR and VOCMM is .020, indicating a complete absence of relationship between the variables. The correlation of VOCMM with D1 is -.251; with D2, it is .099. Since the dummy variables have just two values with unequal numbers of cases in the categories, the correlation is probably underestimated, especially with D2. Nonetheless, there is a tendency for recruiting stations with lower VOCMM values to be located in the Los Angeles NRD.

Table 13

Stepwise Multiple Regression of VOCMM on the Other Educational Variables

Variable[a]	Beta	Partial r at Entry	F at Entry	Terminal F
VOCEDF	0.92787	.695	248.854	131.047
MINORITY	0.45621	.583	136.438	99.319
GWRKF	0.91153	.369	41.610	34.610
GWRKM	-0.77276	-.268	20.289	24.124
ZPLOCIN	-0.25065	-.200	10.959	43.611
TCHSAL	0.32299	.168	7.536	29.351
ZASSVAL	0.27658	.201	10.967	33.827
NHISCH	-0.20669	-.203	11.187	20.442
ZGPTAX	0.10923	.177	8.376	4.493
ZADA2	0.80713	.146	5.487	32.658
ZCREXP	-1.07927	-.287	22.912	40.385
ZPUTRANS	0.20647	.193	9.908	11.255
BLACK	0.11613	.143	5.312	5.412
INDIAN	-0.08051	-.131	4.438	4.438

Note. R^2 = .811, d.f. = 14/253, and F = 77.393.

[a] Variables are listed in the order of entry.

Regression with Data Aggregated by NRS

As explained previously, all recruiters at any one station were assigned the same territorial potential values. This meant that the actual values of the territory potential variables were represented in the preceding analyses in proportion to the number of recruiters at a particular station. This was deemed appropriate because the effectiveness model that was being developed was to be applied at the level of each individual recruiter in the sample. Accordingly, the representation of some variables might have been biased in the analyses to the degree that they were correlated with the actual number of recruiters at a station. This number differed from, and is not to be confused with, NRCTR—the rated strength of an NRS. With 268 recruiters in the study distributed over 108 NRSs, the mean number of recruiters per station was 2.481, the modal value was 2, the standard deviation was 1.123, 68 percent of the stations had 2 or 3 recruiters, and only 5 NRSs had as many as 5 or 6 recruiters. It therefore does not seem that the proportional representation of territory potential variables could have biased the analyses to any great extent, but the actual impact is not known.

To evaluate the impact of proportional representation, and because of the intrinsic interest from a marketing standpoint, a regression analysis was conducted using NETPLUS, averaged over recruiters at the NRS, as the dependent variable. Again, the unit of analysis was the NRS, rather than the individual recruiter, and the stepwise multiple regression procedure was used. The results of the analysis are shown in Table 14. The variables that entered in the first six steps in Table 14 were identical to those shown in Table 9 for NETPLUS, except that VOCMM and BLACK were reversed. The variable that would have entered in the next step, teacher salary (TCHSAL), did not reach a .10 level of significance. If GRADF were eliminated, then the prediction equation in Table 14 would have the same five variables as the equation based on individual recruiter production shown in Table 10. These results show that the proportional representation of the territorial potential variables did not differ materially from the equal representation case with aggregated production data.

Table 14

Stepwise Regression of Mean NRS NETPLUS Production on the Environmental Variables

Variable[a]	Beta	Partial r at Entry	F at Entry	Terminal F
GRADF	.11366	.344	14.243	0.552
D2	-.31695	-.182	3.608	11.319
BLA[illegible]	-.33709	-.181	3.507	11.816
VOCMM	.31943	.261	7.553	7.061
D1	-.29661	-.208	4.631	7.624
ZADA2	.26558	.194	3.934	3.934

Note. $R^2 = .293$, d.f. = 6/101, and $F = 6.96837$.

[a]Variables are listed in the order of entry.

DISCUSSION

Implications for Research and Measurement Methodology

The results of this study have important implications for evaluating recruiter performance and for developing territorial determinants of recruiter productivity. This study's modest success in evaluating recruiter performance supports its original hypotheses. It is neither possible nor necessary to determine the relative importance of specific features of this study, but one of the most important aspects was the explication of the roles that resource apportionment and quota assignments play in determining system output. Any study that uses a gross production measure as a dependent variable without considering resources and goals is merely predicting or capturing the policy decision that determined their allocation, as shown dramatically by Sullivan's (Note 1) results with Marine Corps recruiting. This study chose a period when the quota was not a severe constraint on production, and it developed measures that were representative of recruiter production while being responsive to changes in the territories of various recruiters. These efforts showed that even net production, which was gross production corrected for attritions, could not be reliably predicted—presumably because of the goal effect. It was not until the quality of the production was given extra weight that the production measure became responsive to territorial differences.

Resource allocation was controlled in this study by the variable NRCTR, which was a direct expression of management policy—a station's authorized recruiter strength. Accordingly, the influence of other territorial variables was controlled for, or conditional upon, that strength. It turned out that NRCTR, as an indication of the effects of station size on productivity, had an effect independent of its inclusion as a control variable.

A methodological feature that facilitated the interpretation of findings was the division of productivity variation into three sources: (1) the NRDs as a variable, (2) the potential of the recruiter's territory, defined as aggregated NRS productivity, and (3) an error term—in this case, the variation due to individual recruiter differences. The last source accounted for over half of the variation; knowing this allowed a better evaluation of the utility of the research findings, which were aimed at understanding the remaining portion due to the management and territorial factors.

Of equal importance were the geographic appropriateness and timeliness of the data used to develop the equations depicting the influence of the recruiter's operating environment. The data that were fitted to the NRSs were primarily representative of areas smaller than those served by the NRSs. When this was not true, an objective method existed to partition the data among the NRSs sharing the data source. The school district data also existed in such a wide range of categories that most of the important socioeconomic and cultural characteristics of an area were represented in the analyses. Moreover, for institutional data, there was every reason to believe that these data were of a relatively high order of reliability and validity.

Implications for Marketing and Management

The findings of this study have several implications for marketing and management in recruiting for the Navy. The first is based on the NRD's affect on the production of individual recruiters. The importance of an NRD's commanding officer cannot be completely discounted in determining these difference, but there would seem to be factors of greater importance. First, the basis for allocating resources and goals may not be appropriate. Second, the allocation of resources and goals to an NRD by the area commander is made on one basis, while the utilization and tasking of recruiters in the field are made on another.

The number of Qualified Military Availables (QMAs) significantly affects the decisions of the area commander (Arima, Note 2), even though these numbers—which have been extrapolated down to the county level—are of unknown validity. Even more important, the quality of QMA in one place may not be the same as that in another. In the past, researchers have, no doubt, found that the number of accessions and the number of QMA are closely associated, but a cause-and-effect relationship has not been established. As explained earlier, the error in assuming a causative relationship between the two lies in overlooking the mediating factors of quota setting and resource allocation. Once these factors are controlled and accounted for, the number of QMA could not be expected to have any differential effect on the production of recruits for the Navy; enrollments and the number of high school graduates—like the QMA, an enumeration of the population—had no influence on recruiter production in this study. By themselves, these measures have no qualitative dimension to distinguish the potential of different territories.

This finding has implications for the second of the aforementioned possible causes for discrepancies in NRD production; that is, the number of high school graduates in an area plays an important part in determining the assignment of recruiters at the working level. Indirectly, this practice has the effect of determining quotas on the basis of high school graduates because each recruiter is expected to produce a pro rata share of recruits. If the numbers of QMA and high school graduates are not appropriate bases for assigning goals and resources, then discrepancies in production could be expected. Some districts and stations may have to work much harder to make their goals and may find it almost impossible to recruit quality personnel in the requisite numbers.

Surprisingly, a rather obscure variable bore the main responsibility for determining what a recruiter could be expected to produce. This was the number of male, minority enrollments in vocational education courses (VOCMM). Obviously, it was what the variable represented—its latent content, rather than its manifest content—that made it so important. As shown in Table 13, the determination of VOCMM was very complex. Moreover, VOCMM's effect was not independent of that of the NRD variable. Actually, the best single predictor of quality recruit production was the number of female high school graduates (GRADF) in the area of the recruiting station (Table 9). The reason why GRADF, rather than total enrollments (ENROL) or the number of male high school graduates (GRADM), proved to be

the best predictor is probably that there tend to be more female than male high school graduates at the middle socioeco mic levels, whereas the opposite is true at very high or very low levels. The difference is small, since the correlation among these variables is near unity. In the stepwise regression, GRADF lost all of its unique predictive power once the dummy variables for the NRD and VOCMM entered the eq tion (Table 9). This occurred because there is considerable commonality between VOCMM and GRADF (r = .694). In addition, there was the interactive effect between VOCMM and the dummy variables; that is, VOCMM served to explain some of the sources of differ nce among the NRDs.

Unfortunately, data on minority enrollments in vocational education courses are no longer collected by California. The summary data are now broken down by programs for the disadvantaged and handicapped, apprenticeship training, work experience, and work study. These summary statistics are further broken down by sex and by county, school district, and school. Vocational edu ation statistics are also collected by c ntent areas, such as mechanics, metal working, welding and cutting, etc., according to categories and codes provided by the Bureau of Occupational and Adult Education of the Department of Health, Education, and Welfare (HEW). At the state level in California, enrollments in these categories are listed by county, district, and school; they can also be retrieved by the subject category, which is broken down by county, district, and school. The Department of Health, Education, and Welfare publishes an annual summary of enrollments in the various categories by states. Because these standardized reporting requirements exist, vocational education data should be quite uniform across the entire nation and should be better exploited in recruiting market analy- . Vocational education enrollments by particular programs or by subject reas tell a great deal about the community. There are currently about lion rollments in vocational education courses at the secondary school vel i the nation. Similar statistics exist for community colleges.

Another trend of importance to marketing and management pratices was the tendency for dense metropolitan areas with large recruiting stations to be poorer producers of quality recruits. This tendency appeared in areas with a large number of high schools, large current expenditures for operating the educational system, low expenditures for pupil transportation, and a large percentage of Black students. Perhaps these trends could be interpreted in terms of city size, since Hoch (1976) has shown an association between many negat socioeconomic trends and city size. The NRDs take their iden y fr central city in each district and, assuming that the size of the quot assessed an NRD is indicative of the size of the central city, they can be classified into the 10 largest and the 10 smallest NRDs based on city size.[3] Of the largest 10, those making quotas were Columbus, Boston, and Seattle; those not making quotas were Los Angeles, San Francisco, Chicago, Cleveland, oit, Philadelphia, and Washington, D.C. Of the

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[3]The 10 largest and 10 smallest were determined by the size of the quota for new accessions.

smallest 10, those making quotas were Little Rock, Oklahoma City, Columbia, Jacksonville, Nashville, Memphis, Albuquerque, San Antonio, and Montgomery; only Fargo did not make quota, and it had been inactivated in FY75.[4] The interaction between NRD city size and quota fulfillment is consistent with the findings for California districts. Another study that dichotomized NRDs into those making quota and those not doing so showed similar results with respect to city size and the variables associated with not making quota (Shugart & Lockman, 1974).

A possible explanation for this trend is the association of the variables identifying the trend with NRCTR (Tables 9 and 12). The list of variables associated with NRCTR also reveals that there is a significant negative relationship between NRCTR and the enrollment and average daily attendance in the school districts of the NRS. The latter association may result from the general management policy of assigning more recruiters in areas where there is a greater density of schools and students on the premise that recruiting in such areas is more efficient. In sparsely settled areas, it is argued, recruiters would have to spend an inordinate amount of time traveling. Apparently, the lower quality of students and a greater interest in joining the services in the poorer, dense areas negates the possibility of gains from efficiency; that is, the recruiter spends an inordinate amount of time meeting with unqualified individuals. A reexamination of management policy at the NRD level with respect to the establishment of student-recruiter ratios seems to be warranted.

Implementation Considerations

This exploratory study has shown that it is feasible and meaningful to use educational data at the school district level to determine what a recruiter ought to produce. Undoubtedly, refinements and simplification of procedures could be accomplished, but the approach seems robust enough to implement on a trial basis. The method could be applied in other states; studies being conducted by the RAND Corporation for HEW have already looked deeply into teacher salaries and the utilization of discretionary income in California schools (Alexander, 1974). A Michigan study using similar methodology found that the overall results and trends were quite similar (Barrow & Carroll, 1975). A proportionately large enrollment in private schools might create problems if the desired data were not available. However, on the basis of the RAND studies, and because similar information must be collected nationwide for federal programs (e.g., the reporting of vocational education information), it would appear that the methodology would be broadly generalizable with respect to the availability of the data base.

The methodology suggested here does not envision the utilization of a broadly generalizable and stable prediction equation to determine the expected production of all recruiters over an indefinite period of time. Rather, the goal is to measure and analyze the current operating environment for the purposes of evaluating recruiter performance and providing marketing information to guide management in the distribution of resources

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[4]Data were taken from NAVCRUITCOM Program Analysis for 1-30 June 1974 and for FY74.

and the setting of goals. The utility of the procedure depends on the extent to which variation in recruiter performance due to environmental conditions can be explained. A new equation should be developed whenever a new data base becomes available. To the extent that consistent trends are observed, the repeated application of the procedure will provide valuable experience with respect to the marketplace and the utilization of the recruiter force. Eventually, it may be possible to create an equation that is both stable and broadly generalizable.

CONCLUSIONS

This study showed that the determinants of recruiter productivity could be broken down into those due to management policy, territorial potential, and individual recruiter differences. Over half of the variation in recruiter production could be attributed to individual differences. Of the remaining variation, approximately one-third could be predicted on the basis of management policy and school district statistics, provided that (1) the productivity measure included a weighting for the quality of the output and (2) the resources allocated to the recruiting effort were also considered in the prediction equation. Individual recruiter effectiveness was assessed by the ratio of actual production to expected production, based on the prediction equation. Since the distribution of effectiveness measures for individual recruiters had similar patterns around the means of their respective districts, and since there was a reliable difference in these means among the recruiting districts, it was suggested that the allocation of recruiters and goals required a better decision base than the number of QMAs and high school graduates, as is used at present. It was also shown that the generally accepted policy of placing a great proportion of recruiters in densely populated areas to make more effective use of a recruiter's time may be having a negative consequence.

RECOMMENDATIONS

1. The theoretical model developed in this study should be the basis for future research aimed at understanding the impact of the recruiting environment on the productivity of a recruiting site.

2. Measures of recruiter effectiveness should consider the quality and quantity of a recruiter's production as well as the differential fertility of recruiting locations.

3. The procedures developed in this study for measuring recruiter effectiveness should be evaluated on a larger and more representative data base to gain a better understanding of the environmental factors that affect the recruiting process.

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APPENDIX A

CORRELATION MATRIX OF ALL ENVIRONMENTAL AND PRODUCTION VARIABLES

PEARSON CORRELATION COEFFICIENTS

	ENRCL	GRADM	GRADF	GWRKM	GWRKF	VOCEDM	VOCEDF	VOCMM	READG	WRITG
ENRCL	1.0000 (0) S=0.001	0.9969 (268) S=0.001	0.9962 (268) S=0.001	0.7765 (268) S=0.001	0.7541 (268) S=0.001	0.9884 (268) S=0.001	0.9915 (268) S=0.001	0.6722 (268) S=0.001	0.0015 (268) S=0.490	-0.0516 (268) S=0.200
GRADM	0.9969 (268) S=0.001	1.0000 (0) S=0.001	0.9992 (268) S=0.001	0.7978 (268) S=0.001	0.7761 (268) S=0.001	0.9836 (268) S=0.001	0.9897 (268) S=0.001	0.6887 (268) S=0.001	0.0209 (268) S=0.366	-0.0283 (268) S=0.323
GRADF	0.9962 (268) S=0.001	0.9992 (268) S=0.001	1.0000 (0) S=0.001	0.8027 (268) S=0.001	0.7820 (268) S=0.001	0.9833 (268) S=0.001	0.9898 (268) S=0.001	0.6938 (268) S=0.001	0.0246 (268) S=0.344	-0.0242 (268) S=0.346
GWRKM	0.7765 (268) S=0.001	0.7978 (268) S=0.001	0.8027 (268) S=0.001	1.0000 (0) S=0.001	0.9819 (268) S=0.001	0.7762 (268) S=0.001	0.7864 (268) S=0.001	0.6191 (268) S=0.001	0.1611 (268) S=0.004	0.0835 (268) S=0.087
GWRKF	0.7541 (268) S=0.001	0.7761 (268) S=0.001	0.7820 (268) S=0.001	0.9819 (268) S=0.001	1.0000 (0) S=0.001	0.7527 (268) S=0.001	0.7661 (268) S=0.001	0.6446 (268) S=0.001	0.1806 (268) S=0.002	0.1060 (268) S=0.042
VOCEDM	0.9884 (268) S=0.001	0.9836 (268) S=0.001	0.9833 (268) S=0.001	0.7762 (268) S=0.001	0.7527 (268) S=0.001	1.0000 (0) S=0.001	0.9935 (268) S=0.001	0.6926 (268) S=0.001	-0.0459 (268) S=0.227	-0.1039 (268) S=0.045
VOCEDF	0.9915 (268) S=0.001	0.9897 (268) S=0.001	0.9898 (268) S=0.001	0.7864 (268) S=0.001	0.7661 (268) S=0.001	0.9935 (268) S=0.001	1.0000 (0) S=0.001	0.6952 (268) S=0.001	-0.0148 (268) S=0.405	-0.0725 (268) S=0.118
VOCMM	0.6722 (268) S=0.001	0.6887 (268) S=0.001	0.6938 (268) S=0.001	0.6191 (268) S=0.001	0.6446 (268) S=0.001	0.6926 (268) S=0.001	0.6952 (268) S=0.001	1.0000 (0) S=0.001	-0.2820 (268) S=0.001	-0.2885 (268) S=0.001
READG	0.0015 (268) S=0.490	0.0209 (268) S=0.366	0.0246 (268) S=0.344	0.1611 (268) S=0.004	0.1806 (268) S=0.002	-0.0459 (268) S=0.227	-0.0148 (268) S=0.405	-0.2820 (268) S=0.001	1.0000 (0) S=0.001	0.9424 (268) S=0.001
WRITG	-0.0516 (268) S=0.200	-0.0283 (268) S=0.323	-0.0242 (268) S=0.346	0.0835 (268) S=0.087	0.1060 (268) S=0.042	-0.1039 (268) S=0.045	-0.0725 (268) S=0.118	-0.2885 (268) S=0.001	0.9424 (268) S=0.001	1.0000 (0) S=0.001
SPELG	-0.1934 (268) S=0.001	-0.1658 (268) S=0.003	-0.1635 (268) S=0.004	-0.0254 (268) S=0.339	-0.0066 (268) S=0.457	-0.2482 (268) S=0.001	-0.2122 (268) S=0.001	-0.3101 (268) S=0.001	0.7892 (268) S=0.001	0.8535 (268) S=0.001

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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	ENROL	GRACM	GRADF	GWRKM	GWRKF	VCCEDM	VOCEDF	VOCMP	READG	WRITG
AECTR	-0.0024 (268) S=0.484	0.0236 (268) S=0.353	0.0288 (268) S=0.320	0.1314 (268) S=0.016	0.1533 (268) S=0.006	-0.0034 (268) S=0.478	0.0226 (268) S=0.356	0.0277 (268) S=0.326	0.1315 (268) S=0.016	0.1277 (268) S=0.018
PATH	-0.1374 (268) S=0.012	-0.1160 (268) S=0.029	-0.1130 (268) S=0.032	0.0125 (268) S=0.419	0.0335 (268) S=0.292	-0.1876 (268) S=0.001	-0.1567 (268) S=0.005	-0.3476 (268) S=0.001	0.9118 (268) S=0.001	0.9497 (268) S=0.001
MINORITY	-0.2164 (268) S=0.001	-0.2190 (268) S=0.001	-0.2190 (268) S=0.001	-0.2235 (268) S=0.001	-0.2151 (268) S=0.001	-0.1830 (268) S=0.001	-0.2019 (268) S=0.001	0.2700 (268) S=0.001	-0.7587 (268) S=0.001	-0.6731 (268) S=0.001
INDIAN	0.4778 (268) S=0.001	0.4515 (268) S=0.001	0.4403 (268) S=0.001	0.1567 (268) S=0.005	0.1074 (268) S=0.040	0.4835 (268) S=0.001	0.4736 (268) S=0.001	0.1576 (268) S=0.005	-0.2068 (268) S=0.001	-0.2293 (268) S=0.001
ASIAN	-0.3600 (268) S=0.001	-0.3474 (268) S=0.001	-0.3425 (268) S=0.001	-0.3380 (268) S=0.001	-0.3233 (268) S=0.001	-0.3767 (268) S=0.001	-0.3637 (268) S=0.001	-0.0645 (268) S=0.146	-0.1318 (268) S=0.016	-0.0271 (268) S=0.329
BLACK	-0.2808 (268) S=0.001	-0.2792 (268) S=0.001	-0.2768 (268) S=0.001	-0.2145 (268) S=0.001	-0.1986 (268) S=0.001	-0.2715 (268) S=0.001	-0.2700 (268) S=0.001	0.1110 (268) S=0.035	-0.4705 (268) S=0.001	-0.4003 (268) S=0.001
SPANISH	-0.1271 (268) S=0.019	-0.1261 (268) S=0.020	-0.1268 (268) S=0.019	-0.0543 (268) S=0.188	-0.0457 (268) S=0.228	-0.0846 (268) S=0.084	-0.1122 (268) S=0.033	0.3357 (268) S=0.001	-0.6326 (268) S=0.001	-0.6059 (268) S=0.001
TOTSAL	-0.6173 (248) S=0.001	-0.5840 (268) S=0.001	-0.5808 (268) S=0.001	-0.2815 (268) S=0.001	-0.2598 (268) S=0.001	-0.6499 (268) S=0.001	-0.6295 (268) S=0.001	-0.3027 (268) S=0.001	0.2013 (268) S=0.001	0.2729 (268) S=0.001
ZGPTAX	-0.2623 (268) S=0.001	-0.2796 (268) S=0.001	-0.2740 (268) S=0.001	-0.1071 (268) S=0.040	-0.1066 (268) S=0.041	-0.2731 (268) S=0.001	-0.2773 (268) S=0.001	-0.0534 (268) S=0.192	-0.2657 (268) S=0.001	-0.2189 (268) S=0.001
ZACAZ	-0.7181 (268) S=0.001	-0.6554 (268) S=0.001	-0.6811 (268) S=0.001	-0.4613 (268) S=0.001	-0.4380 (268) S=0.001	-0.7084 (268) S=0.001	-0.7068 (268) S=0.001	-0.3204 (268) S=0.001	-0.0752 (268) S=0.110	0.0034 (268) S=0.478
ZASSVAL	0.4589 (268) S=0.001	0.4446 (268) S=0.001	0.4409 (268) S=0.001	0.2999 (268) S=0.001	0.2756 (268) S=0.001	0.4449 (268) S=0.001	0.4494 (268) S=0.001	0.1360 (268) S=0.013	0.2147 (268) S=0.001	0.1675 (268) S=0.003

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

- - - - - - - - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - - - - - - - -

	ENFCL	GRACP	GRADF	GWRKM	GWRKF	VCCEDM	VOCECF	VOCMM	READG	WRITG
ZPLOCIF	-0.0954 (268) S=0.062	-0.0999 (268) S=0.051	-0.1058 (268) S=0.042	-0.1358 (268) S=0.013	-0.15[illegible] (268) S=0.005	-0.1015 (268) S=0.049	-0.1098 (268) S=0.036	-0.2586 (268) S=0.001	0.2765 (268) S=0.001	0.3308 (268) S=0.001
ZFEDIN1	-0.4388 (268) S=0.001	-0.4315 (268) S=0.001	-0.4267 (268) S=0.001	-0.3348 (268) S=0.001	-0.3261 (268) S=0.001	-0.4321 (268) S=0.001	-0.4353 (268) S=0.001	-0.2597 (268) S=0.001	0.0462 (268) S=0.226	0.0893 (268) S=0.072
ZFEDIN2	-0.6128 (268) S=0.001	-0.5598 (268) S=0.001	-0.5955 (268) S=0.001	-0.4522 (268) S=0.001	-0.4377 (268) S=0.001	-0.5919 (268) S=0.001	-0.5933 (268) S=0.001	-0.2183 (268) S=0.001	-0.2868 (268) S=0.001	-0.2113 (268) S=0.001
ZPLTRANS	-0.5350 (268) S=0.001	-0.5263 (268) S=0.001	-0.5259 (268) S=0.001	-0.4511 (268) S=0.001	-0.4453 (268) S=0.001	-0.5076 (268) S=0.001	-0.5177 (268) S=0.001	-0.2137 (268) S=0.001	-0.2350 (268) S=0.001	-0.1738 (268) S=0.002
ZCUREXP	-0.7043 (268) S=0.001	-0.6781 (268) S=0.001	-0.6751 (268) S=0.001	-0.4521 (268) S=0.001	-0.4332 (268) S=0.001	-0.6962 (268) S=0.001	-0.6947 (268) S=0.001	-0.2985 (268) S=0.001	-0.1588 (268) S=0.005	-0.0724 (268) S=0.119
AFISCH	0.7249 (268) S=0.001	0.7380 (268) S=0.001	0.7404 (268) S=0.001	0.6298 (268) S=0.001	0.6365 (268) S=0.001	0.7140 (268) S=0.001	0.7364 (268) S=0.001	0.4588 (268) S=0.001	0.1187 (268) S=0.026	0.0584 (268) S=0.171
TOTAL	0.2404 (268) S=0.001	0.243[illegible] (268) S=0.001	0.2448 (268) S=0.001	0.1932 (268) S=0.001	0.1998 (268) S=0.001	0.2417 (268) S=0.001	0.2494 (268) S=0.001	0.2696 (268) S=0.001	-0.0827 (268) S=0.089	-0.1029 (268) S=0.046
ACC01	0.2420 (268) S=0.001	0.2471 (268) S=0.001	0.2493 (268) S=0.001	0.1963 (268) S=0.001	0.2004 (268) S=0.001	0.2427 (268) S=0.001	0.2508 (268) S=0.001	0.2556 (268) S=0.001	-0.0736 (268) S=0.115	-0.0975 (268) S=0.056
ACC02	0.0162 (268) S=0.396	0.0090 (268) S=0.442	0.0072 (268) S=0.453	-0.0341 (268) S=0.289	-0.0288 (268) S=0.319	0.0133 (268) S=0.414	0.0148 (268) S=0.405	0.0097 (268) S=0.437	0.0244 (268) S=0.345	0.0584 (268) S=0.170
ACC03	-0.0652 (268) S=0.144	-0.0697 (268) S=0.128	-0.0700 (248) S=0.127	-0.0396 (268) S=0.259	-0.0389 (268) S=0.263	-0.0738 (268) S=0.114	-0.0736 (268) S=0.115	-0.0307 (268) S=0.308	-0.0600 (268) S=0.164	-0.0593 (268) S=0.167
SPE01	0.3059 (268) S=0.001	0.3684 (268) S=0.001	0.3089 (268) S=0.001	0.2172 (268) S=0.001	0.2186 (268) S=0.001	0.3016 (268) S=0.001	0.3068 (268) S=0.001	0.3282 (268) S=0.001	-0.0130 (268) S=0.416	-0.0397 (268) S=0.259

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

PEARSON CORRELATION COEFFICIENTS

	EARCL	GRACM	GRADF	GWRKM	GWRKF	VCCEDM	VOCEDF	VOCMM	READC	WPITG
SPEO2	0.1513 (268) S=0.007	0.1535 (268) S=0.006	0.1520 (268) S=0.006	0.1404 (268) S=0.011	0.1418 (268) S=0.010	0.1523 (268) S=0.006	0.1516 (268) S=0.006	0.0363 (268) S=0.274	0.1364 (268) S=0.013	0.1008 (268) S=0.050
EDI2	0.2056 (268) S=0.001	0.2126 (268) S=0.001	0.2153 (268) S=0.001	0.1777 (268) S=0.002	0.1909 (268) S=0.001	0.1999 (268) S=0.001	0.2141 (268) S=0.001	0.2450 (268) S=0.001	-0.0352 (268) S=0.261	-0.0480 (268) S=0.217
AFQT49	0.2359 (268) S=0.001	0.2430 (268) S=0.001	0.2461 (268) S=0.001	0.2095 (268) S=0.001	0.2141 (268) S=0.001	0.2296 (268) S=0.001	0.2379 (268) S=0.001	0.2420 (268) S=0.001	0.0584 (268) S=0.170	0.0351 (268) S=0.284
EDAFQT	0.2410 (268) S=0.001	0.2459 (268) S=0.001	0.2478 (268) S=0.001	0.2023 (268) S=0.001	0.2095 (268) S=0.001	0.2290 (268) S=0.001	0.2383 (268) S=0.001	0.2178 (268) S=0.001	0.1011 (268) S=0.049	0.0844 (268) S=0.084
ABLACK	-0.1454 (268) S=0.007	0.1520 (268) S=0.006	-0.1491 (268) S=0.007	-0.1584 (268) S=0.005	-0.1587 (268) S=0.005	-0.1461 (268) S=0.008	-0.1430 (268) S=0.010	0.0155 (268) S=0.400	-0.3565 (268) S=0.001	-0.3048 (268) S=0.001
NATTRITE	0.1613 (268) S=0.004	0.1610 (268) S=0.004	0.1585 (268) S=0.005	0.1294 (268) S=0.017	0.1150 (268) S=0.030	0.1899 (268) S=0.001	0.1759 (268) S=0.002	0.1623 (268) S=0.004	-0.1800 (268) S=0.002	-0.2131 (268) S=0.001
AETELLS	0.2877 (268) S=0.001	0.2528 (268) S=0.001	0.2949 (268) S=0.001	0.2249 (268) S=0.001	0.2311 (268) S=0.001	0.2820 (268) S=0.001	0.2922 (268) S=0.001	0.2890 (268) S=0.001	-0.0056 (268) S=0.438	-0.0370 (268) S=0.273
ACCTOTAL	0.2258 (268) S=0.001	0.2241 (268) S=0.001	0.2308 (268) S=0.001	0.1774 (268) S=0.002	0.1832 (268) S=0.001	0.2250 (268) S=0.001	0.2330 (268) S=0.001	0.2419 (268) S=0.001	-0.0737 (268) S=0.114	-0.0912 (268) S=0.068
AET	0.2173 (268) S=0.001	0.2211 (268) S=0.001	0.2237 (268) S=0.001	0.1700 (268) S=0.003	0.1790 (268) S=0.002	0.2054 (268) S=0.001	0.2218 (268) S=0.001	0.2353 (268) S=0.001	-0.0401 (268) S=0.257	-0.0519 (268) S=0.199
EXPECTED	0.6535 (268) S=0.001	0.6767 (268) S=0.001	0.6803 (268) S=0.001	0.5401 (268) S=0.001	0.5654 (268) S=0.001	0.6643 (268) S=0.001	0.6804 (268) S=0.001	0.6773 (268) S=0.001	0.0088 (268) S=0.456	-0.0113 (268) S=0.427
EFFECTIV	0.0048 (268) S=0.489	-0.0000 (268) S=0.500	0.0001 (268) S=0.499	-0.0124 (268) S=0.420	-0.0197 (268) S=0.374	-0.0093 (268) S=0.439	-0.0046 (268) S=0.470	-0.0209 (268) S=0.367	-0.0135 (268) S=0.411	-0.0334 (268) S=0.293

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

PEARSON CORRELATION COEFFICIENTS

	ENRCL	ERACK	GRADF	GWRKM	GWRKF	VCCEDM	VOCEDF	VOCHM	READG	WRITG
D1	-0.1026 (268) S=0.001	-0.3556 (268) S=0.001	-0.3914 (268) S=0.001	-0.2494 (268) S=0.001	-0.2484 (268) S=0.001	-0.3562 (268) S=0.001	-0.4189 (268) S=0.001	-0.2514 (268) S=0.001	-0.0858 (268) S=0.081	-0.0505 (268) S=0.205
D2	-0.0582 (268) S=0.171	-0.0614 (268) S=0.158	-0.0635 (268) S=0.150	0.0321 (268) S=0.301	0.0233 (268) S=0.352	-0.0566 (268) S=0.178	-0.0616 (268) S=0.157	0.0993 (268) S=0.052	0.0655 (268) S=0.143	0.0438 (268) S=0.237

(COEFFICIENT / (CASES) / SIGNIFICANCE) (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

- - - - - - - - - - - - P E A R S O N   C O R R E L A T I O N   C O E F F I C I E N T S - - - - - - - - - - - -

	SPELG	NRCTR	MATH	MINORITY	INDIAN	ASIAN	BLACK	SPANISH	TCHSAL	ZGPTAX
ENROL	-0.1534 (268) S=0.001	-0.0024 (268) S=0.484	-0.1374 (268) S=0.012	-0.2164 (268) S=0.001	0.4778 (268) S=0.001	-0.3600 (268) S=0.001	-0.2808 (268) S=0.001	-0.1271 (268) S=0.019	-0.6173 (268) S=0.001	-0.2823 (268) S=0.001
GRADM	-0.1658 (268) S=0.003	0.0236 (268) S=0.350	-0.1160 (268) S=0.029	-0.2190 (268) S=0.001	0.4515 (268) S=0.001	-0.3474 (268) S=0.001	-0.2752 (268) S=0.001	-0.1261 (268) S=0.020	-0.5840 (268) S=0.001	-0.2796 (268) S=0.001
GRADF	-0.1635 (268) S=0.004	0.0288 (268) S=0.320	-0.1130 (268) S=0.032	-0.2193 (268) S=0.001	0.4403 (268) S=0.001	-0.3425 (268) S=0.001	-0.2768 (268) S=0.001	-0.1268 (268) S=0.019	-0.5808 (268) S=0.001	-0.2740 (268) S=0.001
GWRKM	-0.0254 (268) S=0.339	0.1214 (268) S=0.016	0.0125 (268) S=0.419	-0.2235 (268) S=0.001	0.1567 (268) S=0.005	-0.3380 (268) S=0.001	-0.2145 (268) S=0.001	-0.0543 (268) S=0.188	-0.2815 (268) S=0.001	-0.1071 (268) S=0.040
GWRKF	-0.0066 (268) S=0.457	0.1523 (268) S=0.006	0.0335 (268) S=0.292	-0.2151 (268) S=0.001	0.1074 (268) S=0.040	-0.3235 (268) S=0.001	-0.1986 (268) S=0.001	-0.0457 (268) S=0.228	-0.2558 (268) S=0.001	-0.1066 (268) S=0.041
VOCEDM	-0.2482 (268) S=0.001	-0.0034 (268) S=0.478	-0.1876 (268) S=0.001	-0.1830 (268) S=0.001	0.4835 (268) S=0.001	-0.3767 (268) S=0.001	-0.2715 (268) S=0.001	-0.0846 (268) S=0.084	-0.6455 (268) S=0.001	-0.2731 (268) S=0.001
VOCEDF	-0.2122 (268) S=0.001	0.0226 (268) S=0.356	-0.1567 (268) S=0.005	-0.2019 (268) S=0.001	0.4736 (268) S=0.001	-0.3637 (268) S=0.001	-0.2700 (268) S=0.001	-0.1122 (268) S=0.033	-0.6255 (268) S=0.001	-0.2773 (268) S=0.001
VOCMP	-0.3101 (268) S=0.001	0.0277 (268) S=0.326	-0.3478 (268) S=0.001	0.2700 (268) S=0.001	0.1576 (268) S=0.005	-0.0645 (268) S=0.146	0.1110 (268) S=0.035	0.3357 (268) S=0.001	-0.3027 (268) S=0.001	-0.0534 (268) S=0.192
READG	0.7652 (268) S=0.001	0.1315 (268) S=0.016	0.9118 (268) S=0.001	-0.7587 (268) S=0.001	-0.2068 (268) S=0.001	-0.1318 (268) S=0.016	-0.4705 (268) S=0.001	-0.[illegible]328 (268) S=0.001	0.2013 (268) S=0.001	-0.2697 (268) S=0.001
WRITG	0.8535 (268) S=0.001	0.1277 (268) S=0.018	0.9497 (268) S=0.001	-0.6731 (268) S=0.001	-0.2293 (268) S=0.001	-0.0271 (268) S=0.329	-0.4003 (268) S=0.001	-0.[illegible]59 (268) S=0.001	0.2725 (268) S=0.001	-0.2189 (268) S=0.001
SPELG	1.0000 (0) S=0.001	0.1862 (268) S=0.001	0.8749 (268) S=0.001	-0.4180 (268) S=0.001	-0.3593 (268) S=0.001	0.2167 (268) S=0.001	-0.1634 (268) S=0.004	-0.4445 (268) S=0.001	0.4330 (268) S=0.001	-0.1094 (268) S=0.037

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

PEARSON CORRELATION COEFFICIENTS

	SPELG	ARCTR	MATH	MINORITY	INDIAN	ASIAN	BLACK	SPANISH	TCHSAL	ZGPTAX
ARCTR	0.1662 (268) S=0.001	1.0000 (0) S=0.001	0.1657 (268) S=0.003	0.0115 (268) S=0.426	-0.0845 (268) S=0.084	0.1102 (268) S=0.036	0.1607 (268) S=0.004	-0.0815 (268) [illegible].092	0.17[illegible] (268) S=0.002	0.0927 (268) S=0.065
MATH	0.6749 (268) S=0.001	0.1657 (268) S=0.003	1.0000 (0) S=0.001	-0.6317 (268) S=0.001	-0.3116 (268) S=0.001	0.0847 (268) S=0.083	-0.3189 (268) S=0.001	-0.5980 (268) S=0.[illegible]	0.3395 (268) S=0.001	-0.1928 (268) S=0.001
MINORITY	-0.4180 (268) S=0.001	0.0115 (268) S=0.426	-0.6317 (268) S=0.001	1.0000 (0) S=0.001	-0.0966 (268) S=0.057	0.5504 (268) S=0.001	0.7529 (268) S=0.001	0.8[illegible] ([illegible]) S=[illegible]	0.2201 (268) S=0.001	0.4788 (268) S=0.001
INDIAN	-0.3553 (268) S=0.001	-0.0845 (268) S=0.084	-0.3116 (268) S=0.001	-0.0966 (268) S=0.057	1.0000 (0) S=0.001	-0.2537 (268) S=0.001	-0.1784 (268) S=0.002	-0.187[illegible] (268) S=0.001	-0.5609 (268) S=0.001	-0.2446 (268) S=0.001
ASIAN	0.2167 (268) S=0.001	0.1102 (268) S=0.036	0.0847 (268) S=0.083	0.5504 (268) S=0.001	-0.2537 (268) S=0.001	1.0000 (0) S=0.001	0.5723 (268) S=0.001	0.2807 (268) S=0.001	0.5524 (268) S=0.001	0.4253 (268) S=0.001
BLACK	-0.1634 (268) S=0.004	0.1607 (268) S=0.004	-0.3189 (268) S=0.001	0.7529 (268) S=0.001	-0.1784 (268) S=0.002	0.5723 (268) S=0.001	1.0000 (0) S=0.001	0.4164 (268) S=0.001	0.3725 (268) S=0.001	0.5436 (268) S=0.001
SPANISH	-0.4445 (268) S=0.001	-0.0815 (268) S=0.092	-0.5980 (268) S=0.001	0.8272 (268) S=0.001	-0.1873 (268) S=0.001	0.2807 (268) S=0.001	0.4164 (268) S=0.001	1.0000 (0) S=0.001	0.0992 (268) S=0.053	0.3110 (268) S=0.001
TCHSAL	0.4330 (268) S=0.001	0.1777 (268) S=0.002	0.3395 (268) S=0.001	0.2201 (268) S=0.001	-0.5609 (268) S=0.001	0.5524 (268) S=0.001	0.3725 (268) S=0.001	0.0992 (268) S=0.053	1.0000 (0) S=0.001	0.3231 (268) S=0.001
ZGPTAX	-0.1354 (268) S=0.037	0.0927 (268) S=0.065	-0.1928 (268) S=0.001	0.4788 (268) S=0.001	-0.2446 (268) S=0.001	0.4253 (268) S=0.001	0.5436 (268) S=0.001	0.3110 (268) S=0.001	0.3231 (268) S=0.001	1.0000 (0) S=0.001
ZAIA2	0.1511 (268) S=0.007	0.1927 (268) S=0.001	0.0965 (268) S=0.057	0.3468 (268) S=0.001	-0.5261 (268) S=0.001	0.5004 (268) S=0.001	0.4122 (268) S=0.001	0.2624 (268) S=0.001	0.6760 (268) S=0.001	0.2906 (268) S=0.001
ZASSVAL	0.0785 (268) S=0.100	-0.0976 (268) S=0.055	0.1177 (268) S=0.027	-0.4550 (268) S=0.001	0.3847 (268) S=0.001	-0.3909 (268) S=0.001	-0.4745 (268) S=0.001	-0.4113 (268) S=0.001	-0.4725 (268) S=0.001	-0.3782 (268) S=0.001

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

PEARSON CORRELATION COEFFICIENTS

	SPELG	MCCTR	MATH	MINORITY	INDIAN	ASIAN	BLACK	SPANISH	TCHSAL	ZGPTAX
ZFLOCIA	0.3206 (268) S=0.001	-0.1320 (268) S=0.015	0.35[illegible]2 (268) S=0.001	-0.1629 (268) S=0.034	0.0702 (268) S=0.126	0.1699 (268) S=0.003	-0.0212 (265) S=0.365	-0.2595 (268) S=0.001	0.2597 (268) S=0.001	-0.0573 (268) S=0.175
ZFEDIN1	0.1637 (268) S=0.004	0.2101 (268) S=0.001	0.1715 (268) S=0.002	0.1396 (268) S=0.011	-0.1579 (268) S=0.005	0.3115 (268) S=0.001	0.3859 (268) S=0.001	-0.0782 (268) S=0.101	0.3128 (268) S=0.001	0.1537 (268) S=0.006
ZFEDIN2	-0.0151 (268) S=0.4[illegible]3	0.2363 (268) S=0.001	-0.1225 (268) S=0.023	0.5897 (268) S=0.001	-0.3194 (268) S=0.001	0.5790 (268) S=0.001	0.6811 (268) S=0.001	0.3341 (268) S=0.001	0.4959 (268) S=0.001	0.5040 (268) S=0.001
ZPLTRANS	-0.0903 (268) S=0.070	0.0919 (268) S=0.067	-0.0855 (268) S=0.081	0.4303 (268) S=0.001	-0.2265 (268) S=0.001	0.4716 (268) S=0.001	0.4511 (268) S=0.001	0.3036 (268) S=0.001	0.3404 (268) S=0.001	0.4030 (268) S=0.001
ZURBEXP	0.1145 (268) S=0.031	0.2238 (268) S=0.001	0.0323 (268) S=0.300	0.4888 (268) S=0.001	-0.5067 (268) S=0.001	0.6231 (268) S=0.001	0.5782 (268) S=0.001	0.3158 (268) S=0.001	0.6912 (268) S=0.001	0.5365 (268) S=0.001
APISCH	-0.0649 (268) S=0.145	0.3382 (268) S=0.001	0.0092 (268) S=0.440	-0.2403 (268) S=0.001	0.3377 (268) S=0.001	-0.2503 (268) S=0.001	-0.1895 (268) S=0.001	-0.1873 (268) S=0.001	-0.3845 (268) S=0.001	-0.2632 (268) S=0.001
TOTAL	-0.1125 (268) S=0.033	-0.0766 (268) S=0.106	-0.1142 (268) S=0.031	0.0490 (268) S=0.212	0.0712 (268) S=0.123	0.0500 (268) S=0.208	-0.0596 (268) S=0.16[illegible]	0.0659 (268) S=0.141	-0.1520 (268) S=0.006	-0.0812 (268) S=0.093
ACC01	-0.1166 (268) S=0.028	-0.0781 (268) S=0.101	-0.1147 (268) S=0.030	0.0282 (268) S=0.323	0.0852 (268) S=0.082	0.0453 (268) S=0.230	-0.0825 (268) S=0.089	0.0518 (268) S=0.199	-0.1505 (268) S=0.007	-0.0914 (268) S=0.068
ACC02	0.1008 (268) S=0.050	-0.0012 (268) S=0.492	0.0812 (268) S=0.093	0.0695 (268) S=0.128	-0.0144 (268) S=0.407	0.1113 (268) S=0.034	0.0984 (268) S=0.054	-0.0096 (268) S=0.439	0.0159 (268) S=0.373	-0.0180 (268) S=0.385
ACC03	-0.0467 (268) S=0.223	-0.0290 (268) S=0.318	-0.0611 (268) S=0.160	0.0514 (268) S=0.201	-0.0128 (268) S=0.417	-0.0189 (268) S=0.379	0.0035 (268) S=0.477	0.0642 (268) S=0.148	0.0542 (268) S=0.188	-0.0172 (268) S=0.390
SPE01	-0.0741 (268) S=0.113	-0.0494 (268) S=0.210	-0.0517 (268) S=0.199	-0.0464 (268) S=0.225	0.0961 (268) S=0.058	-0.0227 (268) S=0.355	-0.1586 (268) S=0.005	0.0146 (268) S=0.406	-0.1948 (268) S=0.001	-0.0854 ([illegible]8) S=[illegible]32

(COEFFICIENT / (CASES) / SIGNIFICANCE) (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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	SPELC	ARCTR	MATH	MINORITY	INDIAN	ASIAN	BLACK	SPANISH	TCHSAL	ZGPTAX
SPE02	0.0022 (268) S=0.486	-0.0667 (268) S=0.078	0.0812 (268) S=0.092	-0.2216 (268) S=0.001	0.1174 (268) S=0.027	-0.1217 (268) S=0.023	-0.2402 (268) S=0.001	-0.1383 (268) S=0.012	-0.1748 (268) S=0.002	-0.2048 (268) S=0.001
SD12	-0.0310 (268) S=0.307	-0.0721 (268) S=0.120	-0.0510 (268) S=0.203	0.0250 (268) S=0.342	0.0280 (268) S=0.324	0.0821 (268) S=0.090	-0.0410 (268) S=0.252	0.0072 (268) S=0.453	-0.1172 (268) S=0.028	-0.0717 (268) S=0.121
AFCT49	-0.0206 (268) S=0.369	-0.0875 (268) S=0.077	0.0119 (268) S=0.423	-0.0756 (268) S=0.109	0.0623 (268) S=0.155	-0.0210 (268) S=0.366	-0.1383 (268) S=0.012	-0.0152 (268) S=0.402	-0.1062 (268) S=0.041	-0.1035 (268) S=0.045
SDAFQT	0.0365 (268) S=0.276	-0.1142 (268) S=0.031	0.0586 (268) S=0.170	-0.1162 (268) S=0.029	0.0531 (268) S=0.193	-0.0216 (268) S=0.362	-0.1569 (268) S=0.305	-0.0708 (268) S=0.124	-0.1260 (268) S=0.020	-0.1195 (268) S=0.025
RBLACK	-0.1510 (268) S=0.001	0.0006 (268) S=0.496	-0.3008 (268) S=0.001	0.3990 (268) S=0.001	-0.0474 (268) S=0.220	0.2534 (268) S=0.001	0.4308 (268) S=0.001	0.1647 (268) S=0.003	0.1581 (268) S=0.005	0.2890 (268) S=0.001
RATTRITE	-0.1961 (268) S=0.001	-0.0564 (268) S=0.179	-0.2008 (268) S=0.001	0.1044 (268) S=0.044	0.0661 (268) S=0.141	0.0113 (268) S=0.427	-0.0227 (268) S=0.356	0.1079 (268) S=0.039	-0.1344 (268) S=0.014	-0.0455 (268) S=0.229
RETPLUS	-0.0812 (268) S=0.053	-0.0797 (268) S=0.097	-0.0591 (268) S=0.168	-0.0458 (268) S=0.228	0.1050 (268) S=0.043	0.0058 (268) S=0.463	-0.1511 (268) S=0.007	0.0056 (268) S=0.464	-0.1871 (268) S=0.001	-0.1220 (268) S=0.023
ACCTOTAL	-0.1013 (268) S=0.049	-0.0783 (268) S=0.101	-0.1042 (268) S=0.044	0.0441 (268) S=0.236	0.0776 (268) S=0.103	0.0584 (268) S=0.171	-0.0630 (268) S=0.152	0.0557 (268) S=0.182	-0.1345 (268) S=0.014	-0.0922 (268) S=0.066
RET	-0.0675 (268) S=0.135	-0.0753 (268) S=0.110	-0.0697 (268) S=0.123	0.0247 (268) S=0.343	0.0721 (268) S=0.120	0.0635 (268) S=0.150	-0.0661 (268) S=0.141	0.0371 (268) S=0.273	-0.1201 (268) S=0.025	-0.0936 (268) S=0.063
EXPECTED	-0.1313 (268) S=0.016	0.0121 (268) S=0.422	-0.0683 (268) S=0.133	-0.1223 (268) S=0.023	0.2542 (268) S=0.001	-0.0587 (268) S=0.169	-0.3540 (268) S=0.001	0.0021 (268) S=0.487	-0.3556 (268) S=0.001	-0.2812 (268) S=0.001
EFFECTIV	-0.0276 (268) S=0.326	-0.1160 (268) S=0.029	-0.0320 (268) S=0.301	-0.0015 (268) S=0.490	0.0055 (268) S=0.464	0.0300 (268) S=0.312	-0.0056 (268) S=0.463	-0.0020 (268) S=0.487	-0.0365 (268) S=0.276	-0.0064 (268) S=0.458

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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	SPELG	ARC7R	MATH	MINORITY	INDIAN	ASIAN	BLACK	SPANISH	TCHSAL	ZGPTAX
C1	0.0342 (268) S=0.289	-0.1407 (268) S=0.011	-0.0625 (268) S=0.154	0.1720 (268) S=0.002	-0.3655 (268) S=0.001	0.1527 (268) S=0.006	0.0699 (268) S=0.127	0.2561 (268) S=0.001	0.2856 (268) S=0.001	0.2505 (268) S=0.001
C2	0.0225 (268) S=0.357	0.1629 (268) S=0.046	0.0537 (268) S=0.191	-0.0481 (268) S=0.217	-0.0784 (268) S=0.100	-0.3133 (268) S=0.001	0.0242 (268) S=0.347	0.0150 (268) S=0.404	0.0363 (268) S=0.266	-0.1188 (268) S=0.026

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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	ZAEA2	ZASSVAL	ZPLOCIN	ZFEDIN1	ZFEDIN2	ZFUTRANS	ZCUREXP	NHISCH	TOTAL	ACQ01
ENRGL	-0.7181 (268) S=0.001	0.4589 (268) S=0.001	-0.0854 (268) S=0.082	-0.4388 (268) S=0.001	-0.6128 (268) S=0.001	-0.5390 (268) S=0.001	-0.7043 (268) S=0.001	0.7249 (268) S=0.001	0.2404 (268) S=0.001	0.2420 (268) S=0.001
GRADM	-0.6654 (268) S=0.001	0.4446 (268) S=0.001	-0.0999 (268) S=0.051	-0.4315 (268) S=0.001	-0.5998 (268) S=0.001	-0.5265 (268) S=0.001	-0.6781 (268) S=0.001	0.7380 (268) S=0.001	0.2431 (268) S=0.001	0.2471 (268) S=0.001
GRADF	-0.6811 (268) S=0.001	0.4469 (268) S=0.001	-0.1058 (268) S=0.042	-0.4267 (268) S=0.001	-0.5955 (268) S=0.001	-0.5235 (268) S=0.001	-0.6731 (268) S=0.001	0.7404 (268) S=0.001	0.2448 (268) S=0.001	0.2453 (268) S=0.001
GWRKM	-0.4613 (268) S=0.001	0.2999 (268) S=0.001	-0.1358 (268) S=0.013	-0.3348 (268) S=0.001	-0.4522 (268) S=0.001	-0.4511 (268) S=0.001	-0.4521 (268) S=0.001	0.6298 (268) S=0.001	0.1532 (268) S=0.001	0.1963 (268) S=0.001
GWRKF	-0.4380 (268) S=0.001	0.2756 (268) S=0.001	-0.1582 (268) S=0.005	-0.3261 (268) S=0.001	-0.4377 (268) S=0.001	-0.4453 (268) S=0.001	-0.4332 (268) S=0.001	0.6365 (268) S=0.001	0.1558 (268) S=0.001	0.2004 (268) S=0.001
VOCEDM	-0.7084 (268) S=0.001	0.4449 (268) S=0.001	-0.1015 (268) S=0.049	-0.4321 (268) S=0.001	-0.5919 (268) S=0.001	-0.5076 (268) S=0.001	-0.6962 (268) S=0.001	0.7140 (268) S=0.001	0.2417 (268) S=0.001	0.2427 (268) S=0.001
VOCEDF	-0.7068 (268) S=0.001	0.4494 (268) S=0.001	-0.1098 (268) S=0.036	-0.4353 (268) S=0.001	-0.5933 (268) S=0.001	-0.5177 (268) S=0.001	-0.6547 (268) S=0.001	0.7364 (268) S=0.001	0.2454 (268) S=0.001	0.2508 (268) S=0.001
VCCMM	-0.3204 (268) S=0.001	0.1360 (268) S=0.013	-0.2986 (268) S=0.001	-0.2597 (268) S=0.001	-0.2183 (268) S=0.001	-0.2157 (268) S=0.001	-0.2985 (268) S=0.001	0.4588 (268) S=0.001	0.2656 (268) S=0.001	0.2556 (268) S=0.001
REACG	-0.0752 (268) S=0.110	0.2147 (268) S=0.001	0.2769 (268) S=0.001	0.0462 (268) S=0.226	-0.2868 (268) S=0.001	-0.2390 (268) S=0.001	-0.1588 (268) S=0.005	0.1187 (268) S=0.026	-0.0827 (268) S=0.089	-0.0736 (268) S=0.115
WRITG	0.0034 (268) S=0.478	0.1675 (268) S=0.003	0.3308 (268) S=0.001	0.0893 (268) S=0.072	-0.2113 (268) S=0.001	-0.1738 (268) S=0.002	-0.0724 (268) S=0.119	0.0582 (268) S=0.171	-0.1025 (268) S=0.046	-0.0975 (268) S=0.056
SPELG	0.1511 (268) S=0.007	0.0785 (268) S=0.100	0.3306 (268) S=0.001	0.1637 (268) S=0.004	-0.0151 (268) S=0.403	-0.0903 (268) S=0.070	0.1145 (268) S=0.031	-0.0649 (268) S=0.145	-0.1125 (268) S=0.033	-0.1166 (268) S=0.028

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	ZACA2	ZASSVAL	ZPLOCIN	ZFECIN1	ZFECIN2	ZFUTRANS	ZCUREXP	NHISCH	TOTAL	ACC01
ARCIR	0.1527 (268) S=0.001	-0.0576 (268) S=0.055	-0.1320 (268) S=0.015	0.2101 (268) S=0.001	0.2363 (268) S=0.001	0.0919 (268) S=0.067	0.2238 (268) S=0.001	0.3382 (268) S=0.001	-0.0766 (268) S=0.106	-0.0781 (268) S=0.101
MATH	0.0565 (268) S=[illegible]	0.1177 (268) S=0.027	0.3512 (268) S=0.001	0.1715 (268) S=0.002	-0.1225 (268) S=0.023	-0.0855 (268) S=0.081	0.0383 (268) S=0.300	0.0092 (268) S=0.440	-0.1142 (268) S=0.031	-0.1147 (268) S=0.030
MINORITY	0.3468 (268) S=0.001	-0.4550 (268) S=0.001	-0.1629 (268) S=0.004	0.1396 (268) S=0.011	0.5897 (268) S=0.001	0.4303 (268) S=0.001	0.4888 (268) S=0.001	-0.2433 (268) S=0.001	0.0490 (268) S=0.212	0.0282 (268) S=0.323
INDIAN	-0.5261 (268) S=0.001	0.3847 (268) S=0.001	0.0702 (268) S=0.126	-0.1579 (268) S=0.005	-0.3194 (268) S=0.001	-0.2265 (268) S=0.001	-0.5067 (268) S=0.001	0.3377 (268) S=0.001	0.0712 (268) S=0.123	0.0852 (268) S=0.082
ASIAN	0.5004 (268) S=0.001	-0.3909 (268) S=0.001	0.1699 (268) S=0.003	0.3115 (268) S=0.001	0.5790 (268) S=0.001	0.4716 (268) S=0.001	0.6231 (268) S=0.001	-0.2503 (268) S=0.001	0.0500 (268) S=0.206	0.0453 (268) S=0.230
BLACK	0.4121 (268) S=0.001	-0.4745 (268) S=0.001	-0.0212 (268) S=0.365	0.3858 (268) S=0.001	0.6811 (268) S=0.001	0.4911 (268) S=0.001	0.5782 (268) S=0.001	-0.1895 (268) S=0.001	-0.0556 (268) S=0.166	-0.0825 (268) S=0.089
SPANISH	0.2624 (268) S=0.001	-0.4113 (268) S=0.001	-0.2995 (268) S=0.001	-0.0782 (268) S=0.101	0.3341 (268) S=0.001	0.3036 (268) S=0.001	0.3158 (268) S=0.001	-0.1873 (268) S=0.001	0.0655 (268) S=0.141	0.0518 (268) S=0.199
TCHSAL	0.6760 (268) S=0.001	-0.4725 (268) S=0.001	0.2597 (268) S=0.001	0.3128 (268) S=0.001	0.4999 (268) S=0.001	0.3404 (268) S=0.001	0.6912 (268) S=0.001	-0.3849 (268) S=0.001	-0.1520 (268) S=0.006	-0.1509 (268) S=0.007
ZGFTAX	0.2566 (268) S=0.001	-0.3782 (268) S=0.001	-0.0573 (268) S=0.175	0.1537 (268) S=0.006	0.5040 (268) S=0.001	0.4030 (268) S=0.001	0.5365 (268) S=0.001	-0.2662 (268) S=0.001	-0.0812 (268) S=0.093	-0.0914 (268) S=0.068
ZACA2	1.0000 (0) S=0.001	-0.6654 (268) S=0.001	-0.1221 (268) S=0.023	0.5006 (268) S=0.001	0.7911 (268) S=0.001	0.7556 (268) S=0.001	0.9359 (268) S=0.001	-0.3871 (268) S=0.001	-0.0882 (268) S=0.075	-0.0941 (268) S=0.062
ZASSVAL	-0.6654 (268) S=0.001	1.0000 (0) S=0.001	0.3211 (268) S=0.001	-0.3270 (268) S=0.001	-0.6122 (268) S=0.001	-0.4306 (268) S=0.001	-0.6351 (268) S=0.001	0.3312 (268) S=0.001	0.0840 (268) S=0.085	0.1075 (268) S=0.040

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	ZACA2	ZASSVAL	ZPLOCIN	ZFEDIN1	ZFEDIN2	ZPUTRANS	ZCLREXP	NFISCH	TOTAL	ACC01
ZFLOCIN	-0.1221 (268) S=0.023	0.3211 (268) S=0.001	1.0000 (0) S=0.001	-0.1086 (268) S=0.038	-0.1971 (268) S=0.001	-0.0754 (268) S=0.109	-0.0919 (268) S=0.067	-0.1170 (268) S=0.028	-0.0837 (268) S=0.086	-0.0744 (268) S=0.112
ZFEDIN1	0.5006 (268) S=0.001	-0.3270 (268) S=0.001	-0.1086 (268) S=0.038	1.0000 (0) S=0.001	0.6487 (268) S=0.001	0.5138 (268) S=0.001	0.5171 (268) S=0.001	-0.2670 (268) S=0.001	-0.1724 (268) S=0.002	-0.1916 (268) S=0.001
ZFEDIN2	0.7911 (268) S=0.001	-0.6122 (268) S=0.001	-0.1971 (268) S=0.001	0.6487 (268) S=0.001	1.0000 (0) S=0.001	0.7747 (268) S=0.001	0.8913 (268) S=0.001	-0.4221 (268) S=0.001	-0.1086 (268) S=0.038	-0.1302 (268) S=0.017
ZPUTRANS	0.7556 (268) S=0.001	-0.4306 (268) S=0.001	-0.0754 (268) S=0.109	0.5138 (268) S=0.001	0.7747 (268) S=0.001	1.0000 (0) S=0.001	0.8161 (268) S=0.001	-0.2950 (268) S=0.001	-0.0840 (268) S=0.085	-0.0792 (268) S=0.098
ZCLREXP	0.9359 (268) S=0.001	-0.6351 (268) S=0.001	-0.0919 (268) S=0.067	0.5171 (268) S=0.001	0.8913 (268) S=0.001	0.8161 (268) S=0.001	1.0000 (0) S=0.001	-0.4201 (268) S=0.001	-0.1063 (268) S=0.041	-0.1162 (268) S=0.029
NFISCH	-0.2871 (268) S=0.001	0.2312 (268) S=0.001	-0.1170 (268) S=0.028	-0.2670 (268) S=0.001	-0.4221 (268) S=0.001	-0.2950 (268) S=0.001	-0.4201 (268) S=0.001	1.0000 (0) S=0.001	0.1926 (268) S=0.001	0.2004 (268) S=0.001
TOTAL	-0.0882 (268) S=0.075	0.0840 (268) S=0.085	-0.0837 (268) S=0.086	-0.1724 (268) S=0.002	-0.1086 (268) S=0.038	-0.0840 (268) S=0.085	-0.1063 (268) S=0.041	0.1926 (268) S=0.001	1.0000 (0) S=0.001	0.9608 (268) S=0.001
ACC01	-0.0941 (268) S=0.062	0.1075 (268) S=0.040	-0.0744 (268) S=0.112	-0.1916 (268) S=0.001	-0.1302 (268) S=0.017	-0.0792 (268) S=0.098	-0.1162 (268) S=0.029	0.2004 (268) S=0.001	0.9608 (268) S=0.001	1.0000 (0) S=0.001
ACC02	0.0180 (268) S=0.384	0.0028 (268) S=0.482	0.0662 (268) S=0.140	0.1113 (268) S=0.034	0.0922 (268) S=0.066	-0.0046 (268) S=0.470	0.0401 (268) S=0.257	-0.0082 (268) S=0.447	0.2714 (268) S=0.001	0.0828 (268) S=0.088
ACC03	0.0801 (268) S=0.095	-0.1808 (268) S=0.001	-0.1111 (268) S=0.035	0.0576 (268) S=0.174	0.0520 (268) S=0.198	0.0020 (268) S=0.487	0.0498 (268) S=0.208	-0.0634 (268) S=0.150	0.2326 (268) S=0.001	0.0745 (268) S=0.112
SPE01	-0.1821 (268) S=0.001	0.2455 (268) S=0.001	-0.0573 (268) S=0.175	-0.2220 (268) S=0.001	-0.2082 (268) S=0.001	-0.1011 (268) S=0.049	-0.1815 (268) S=0.001	0.2549 (268) S=0.001	0.6833 (268) S=0.001	0.6539 (268) S=0.001

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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	ZACAZ	ZASSVAL	ZPLOCIN	ZFEDIN1	ZFEDIN2	ZFUTRANS	ZCUREXP	NMISCH	TOTAL	ACQ#1
SPEO2	-0.0518 (268) S=0.067	0.1307 (268) S=0.016	-0.0977 (268) S=0.055	-0.0090 (268) S=0.441	-0.1247 (268) S=0.021	-0.0388 (268) S=0.263	-0.1506 (268) S=0.007	0.1307 (268) S=0.016	0.3600 (268) S=0.001	0.3954 (268) S=0.001
EC12	-0.0787 (268) S=0.100	0.0749 (268) S=0.111	-0.1063 (268) S=0.041	-0.0860 (268) S=0.080	-0.0671 (268) S=0.137	-0.0905 (268) S=0.070	-0.0875 (268) S=0.077	0.1968 (268) S=0.005	0.9205 (268) S=0.001	0.8449 (268) S=0.001
AFCT45	-0.1058 (268) S=0.056	0.1421 (268) S=0.010	-0.0463 (268) S=0.225	-0.1763 (268) S=0.002	-0.1564 (268) S=0.005	-0.0976 (268) S=0.055	-0.1354 (268) S=0.013	0.1598 (268) S=0.001	0.8446 (268) S=0.001	0.8528 (268) S=0.001
EDAFQT	-0.1330 (268) S=0.015	0.1510 (268) S=0.007	-0.0540 (268) S=0.189	-0.1240 (268) S=0.021	-0.1510 (268) S=0.007	-0.1137 (268) S=0.032	-0.1557 (268) S=0.005	0.1841 (268) S=0.001	0.7720 (268) S=0.001	0.760[illegible] (268) S=0.001
NBLACK	0.1778 (268) S=0.002	-0.2935 (268) S=0.001	-0.0155 (268) S=0.400	0.1234 (268) S=0.022	0.3050 (268) S=0.001	0.1297 (268) S=0.017	0.2453 (268) S=0.001	-0.1808 (268) S=0.001	0.2448 (268) S=0.001	0.2313 (268) S=0.001
NATTRITE	-0.0650 (268) S=0.144	0.0680 (268) S=0.134	-0.0360 (268) S=0.279	-0.1574 (268) S=0.005	-0.0771 (268) S=0.104	-0.0506 (268) S=0.205	-0.0740 (268) S=0.114	0.1266 (268) S=0.019	0.6313 (268) S=0.001	0.6370 (268) S=0.001
NETPLUS	-0.1354 (268) S=0.011	0.1777 (268) S=0.002	-0.0848 (268) S=0.083	-0.1992 (268) S=0.001	-0.1787 (268) S=0.002	-0.0933 (268) S=0.064	-0.1628 (268) S=0.004	0.2408 (268) S=0.001	0.9143 (268) S=0.001	0.9376 (268) S=0.001
ACCTOTAL	-0.0774 (268) S=0.103	0.0813 (268) S=0.092	-0.0741 (268) S=0.113	-0.1597 (268) S=0.005	-0.1037 (268) S=0.045	-0.0761 (268) S=0.107	-0.0987 (268) S=0.053	0.1825 (268) S=0.001	0.9884 (268) S=0.001	0.9772 (268) S=0.001
NET	-0.0721 (268) S=0.120	0.0758 (268) S=0.108	-0.0754 (268) S=0.109	-0.1420 (268) S=0.010	-0.0993 (268) S=0.053	-0.0742 (268) S=0.113	-0.0941 (268) S=0.062	0.1765 (268) S=0.002	0.9651 (268) S=0.001	0.9550 (268) S=0.001
EXPECTED	-0.3267 (268) S=0.001	0.3312 (268) S=0.001	-0.1454 (268) S=0.009	-0.3714 (268) S=0.001	-0.4483 (268) S=0.001	-0.2561 (268) S=0.001	-0.3551 (268) S=0.001	0.6234 (268) S=0.001	0.3467 (268) S=0.001	0.3751 (268) S=0.001
EFFECTIV	0.0047 (268) S=0.470	0.0577 (268) S=0.173	-0.0084 (268) S=0.445	-0.0437 (268) S=0.238	0.0085 (268) S=0.445	0.0216 (268) S=0.363	0.0086 (268) S=0.444	-0.0176 (268) S=0.387	0.8351 (268) S=0.001	0.8464 (268) S=0.001

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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	ZACA2	ZASSVAL	ZPLOCIN	ZFEDIH1	ZFEDIN2	ZFUTRANS	ZCLREXP	NHISCH	TOTAL	ACQ01
C1	0.4609	-0.4251	-0.0364	-0.0651	0.2625	0.2417	0.4403	-0.4038	-0.0812	-0.0909
	(268)	(268)	(268)	(268)	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.001	S=0.001	S=0.277	S=0.144	S=0.001	S=0.001	S=0.001	S=0.001	S=0.092	S=0.069
C2	-0.0054	-0.0022	-0.1756	0.2805	0.1119	-0.0323	-0.0385	-0.1629	-0.1456	-0.1893
	(268)	(268)	(268)	(268)	(268)	(268)	(268)	(368)	(268)	(258)
	S=0.439	S=0.486	S=0.002	S=0.001	S=0.034	S=0.299	S=0.265	S=0.004	S=0.009	S=0.001

(COEFFICIENT / (CASES) / SIGNIFICANCE)   (A VALUE OF 95.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED)

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	ACQ02	ACC03	SPEG1	SPE02	EC12
ENROL	0.0162 (268) S=0.356	-0.0652 (268) S=0.144	0.3059 (268) S=0.001	0.1513 (268) S=0.007	0.2096 (268) S=0.001
GRADM	0.0090 (268) S=0.442	-0.0657 (268) S=0.128	0.3084 (268) S=0.001	0.1535 (268) S=0.006	0.2126 (268) S=0.001
GRADF	0.0072 (268) S=0.453	-0.0700 (268) S=0.127	0.3089 (268) S=0.001	0.1520 (268) S=0.006	0.2153 (268) S=0.001
GWRKM	-0.0341 (268) S=0.289	-0.0396 (268) S=0.259	0.2172 (268) S=0.001	0.1404 (268) S=0.011	0.1777 (268) S=0.002
GWRKF	-0.0288 (268) S=0.319	-0.0389 (268) S=0.263	0.2186 (268) S=0.001	0.1418 (268) S=0.010	0.1909 (268) S=0.001
VOCEDM	0.0123 (268) S=0.414	-0.0728 (268) S=0.114	0.3016 (268) S=0.001	0.1523 (268) S=0.006	0.1999 (268) S=0.001
VOCEDF	0.0148 (268) S=0.405	-0.0736 (268) S=0.115	0.3068 (268) S=0.001	0.1516 (268) S=0.006	0.2141 (268) S=0.001
VOCMM	0.0157 (268) S=0.437	-0.0307 (268) S=0.308	0.3282 (268) S=0.001	0.0368 (268) S=0.274	0.2450 (268) S=0.001
READG	0.0244 (268) S=0.345	-0.0600 (268) S=0.164	-0.0130 (268) S=0.416	0.1364 (268) S=0.013	-0.0392 (268) S=0.261
WRITE	0.0564 (268) S=0.179	-0.0593 (268) S=0.167	-0.0397 (268) S=0.259	0.1008 (268) S=0.050	-0.0480 (268) S=0.217
SPELG	0.1008 (268) S=0.050	-0.0467 (268) S=0.223	-0.0745 (268) S=0.113	0.0022 (268) S=0.486	-0.0310 (268) S=0.307

	AFQT49	EDAFQT	NBLACK	NATTRITE	NETPLUS
ENROL	0.2355 (268) S=0.001	0.2410 (268) S=0.001	-0.1494 (268) S=0.007	0.1613 (268) S=0.004	0.2877 (268) S=0.001
GRADM	0.2430 (268) S=0.001	0.2459 (268) S=0.001	-0.1520 (268) S=0.006	0.1610 (268) S=0.004	0.2928 (268) S=0.001
GRADF	0.2441 (268) S=0.001	0.2478 (268) S=0.001	-0.1492 (268) S=0.007	0.1565 (268) S=0.005	0.2947 (268) S=0.001
GWRKM	0.2095 (268) S=0.001	0.2023 (268) S=0.001	-0.1584 (268) S=0.005	0.1294 (268) S=0.017	0.2249 (268) S=0.001
GWRKF	0.2141 (268) S=0.001	0.2095 (268) S=0.001	-0.1587 (268) S=0.005	0.1155 (268) S=0.030	0.2[illegible] (268) S=0.001
VOCEDM	0.2256 (268) S=0.001	0.2290 (268) S=0.001	-0.1461 (268) S=0.008	0.1655 (268) S=0.001	0.2623 (268) S=0.001
VOCEDF	0.2379 (268) S=0.001	0.2363 (268) S=0.001	-0.1420 (268) S=0.010	0.1755 (268) S=0.002	0.2922 (268) S=0.001
VOCMM	0.2420 (268) S=0.001	0.2178 (268) S=0.001	0.0155 (268) S=0.400	0.1623 (268) S=0.004	0.2890 (268) S=0.001
READG	0.0584 (268) S=0.170	0.1011 (268) S=0.049	-0.3563 (268) S=0.001	-0.1800 (268) S=0.002	-0.0096 (268) S=0.438
WRITE	0.0351 (268) S=0.284	0.0844 ([illegible]) S=0.[illegible]	-0.3040 (268) S=0.001	-0.2131 (268) S=0.001	-0.0370 (268) S=0.273
SPELG	-0.0206 (268) S=0.369	0.0360 (268) S=0.276	-0.1910 (268) S=0.001	-0.1961 (268) S=0.001	-0.0812 (268) S=0.093

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	ACQ02	ACQ03	SPE01	SPE02	EC12	AFQT4S	EDAFDT	NBLACK	NATTRITE	NETPLUS
PRCTR	-0.0012 (268) S=0.492	-0.0290 (268) S=0.318	-0.0494 (268) S=0.210	-0.0867 (268) S=0.078	-0.0721 (268) S=0.120	-0.0875 (268) S=0.077	-0.1142 (268) S=0.031	0.0006 (268) S=0.496	-0.0564 (268) S=0.179	-0.0797 (268) S=0.097
MATH	0.0812 (268) S=0.093	-0.0611 (268) S=0.163	-0.0517 (268) S=0.199	0.0812 (268) S=0.092	-0.0510 (268) S=0.203	0.0119 (268) S=0.423	0.0586 (268) S=0.170	-0.3008 (268) S=0.001	-0.2008 (268) S=0.001	-0.0591 (268) S=0.168
MINORITY	0.0655 (268) S=0.128	0.0514 (268) S=0.201	-0.0464 (268) S=0.225	-0.2216 (268) S=0.001	0.0250 (268) S=0.342	-0.0756 (268) S=0.109	-0.1162 (268) S=0.029	0.3590 (268) S=0.001	0.1034 (268) S=0.044	-0.0458 (268) S=0.228
INDIAN	-0.0144 (268) S=0.407	-0.0128 (268) S=0.417	0.0961 (268) S=0.058	0.1174 (268) S=0.027	0.0280 (268) S=0.324	0.0623 (268) S=0.155	0.0531 (268) S=0.193	-0.0474 (268) S=0.220	0.0661 (268) S=0.141	0.1050 (268) S=0.043
ASIAN	0.1113 (268) S=0.034	-0.0189 (268) S=0.379	-0.0227 (268) S=0.355	-0.1217 (268) S=0.023	0.0821 (268) S=0.090	-0.0210 (268) S=0.366	-0.0216 (268) S=0.362	0.2534 (268) S=0.001	0.0113 (268) S=0.427	0.0058 (268) S=0.463
BLACK	0.0984 (268) S=0.054	0.0035 (268) S=0.477	-0.1586 (268) S=0.005	-0.2402 (268) S=0.001	-0.0410 (268) S=0.252	-0.1383 (268) S=0.012	-0.1569 (268) S=0.005	0.4308 (268) S=0.001	-0.0227 (268) S=0.356	-0.1511 (268) S=0.007
SPANISH	-0.0094 (268) S=0.439	0.0642 (268) S=0.148	0.0146 (268) S=0.406	-0.1388 (268) S=0.012	0.0072 (268) S=0.453	-0.0152 (268) S=0.402	-0.0708 (268) S=0.124	0.1647 (268) S=0.003	0.1079 (268) S=0.039	0.0056 (268) S=0.464
TCHSAL	0.0159 (268) S=0.373	0.0542 (268) S=0.188	-0.1948 (268) S=0.001	-0.1748 (268) S=0.002	-0.1172 (268) S=0.028	-0.1062 (268) S=0.041	-0.1260 (268) S=0.020	0.1581 (268) S=0.005	-0.1344 (268) S=0.014	-0.1871 (268) S=0.001
ZGPTAX	-0.0180 (268) S=0.385	-0.0172 (268) S=0.390	-0.0854 (268) S=0.082	-0.2048 (268) S=0.001	-0.0717 (268) S=0.121	-0.1035 (268) S=0.045	-0.1155 (268) S=0.025	0.2890 (268) S=0.001	-0.0455 (268) S=0.229	-0.1220 (268) S=0.023
ZACA2	0.0180 (268) S=0.384	0.0801 (268) S=0.095	-0.1821 (268) S=0.001	-0.0918 (268) S=0.067	-0.0787 (268) S=0.100	-0.1098 (268) S=0.036	-0.1330 (268) S=0.015	0.1778 (268) S=0.002	-0.0650 (268) S=0.144	-0.1394 (268) S=0.011
ZASSVAL	0.0028 (268) S=0.482	-0.1808 (268) S=0.001	0.2455 (268) S=0.001	0.1307 (268) S=0.016	0.0749 (268) S=0.111	0.1421 (268) S=0.010	0.1510 (268) S=0.007	-0.2535 (268) S=0.001	0.0680 (268) S=0.134	0.1777 (268) S=0.002

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	ACCO2	ACCO3	SPE01	SPE02	EC12	AFQT49	EDAFST	NPLACK	NATTRITE	NETPLUS
ZFLCCIN	0.0622 (268) S=0.140	-0.1111 (268) S=0.035	-0.0573 (268) S=0.175	-0.0977 (268) S=0.055	-0.1063 (268) S=0.041	-0.0463 (268) S=0.223	-0.0543 (268) S=0.189	-0.0155 (268) S=0.400	-0.0360 (268) S=0.279	-0.0848 (268) S=0.083
ZFEDIN1	0.1113 (268) S=0.034	0.0576 (268) S=0.174	-0.2220 (268) S=0.001	-0.0090 (268) S=0.441	-0.0860 (268) S=0.080	-0.1763 (268) S=0.002	-0.1240 (268) S=0.021	0.1234 (268) S=0.022	-0.1574 (268) S=0.005	-0.1992 (268) S=0.001
ZFEDIN2	0.0922 (268) S=0.066	0.0520 (268) S=0.198	-0.2082 (269) S=0.001	-0.1247 (268) S=0.021	-0.0671 (268) S=0.137	-0.1564 (268) S=0.005	-0.1510 (268) S=0.007	0.3050 (268) S=0.001	-0.0771 (268) S=0.104	-0.1787 (268) S=0.002
ZPLTRANS	-0.0046 (268) S=0.470	0.0020 (268) S=0.487	.011 (268) S=0.049	-0.0388 (268) S=0.263	-0.0905 (268) S=0.070	-0.0976 (268) S=0.055	-0.1137 (268) S=0.032	0.1297 (268) S=0.017	-0.0506 (268) S=0.205	-0.0933 (268) S=0.064
ZCUREXP	0.0401 (268) S=0.257	0.0498 (268) S=0.208	-0.1815 (268) S=0.001	-0.1506 (268) S=0.007	-0.0875 (268) S=0.077	-0.1354 (268) S=0.013	-0.1557 (268) S=0.005	0.2453 (268) S=0.001	-0.0740 (268) S=0.114	-0.1628 (268) S=0.004
NFISCH	-0.0082 (268) S=0.447	-0.0634 (268) S=0.150	0.2549 (268) S=0.001	0.1307 (268) S=0.016	0.1568 (268) S=0.005	0.1998 (268) S=0.001	0.1841 (268) S=0.001	-0.1808 (268) S=0.001	0.1266 (268) S=0.019	0.2408 (268) S=0.001
TOTAL	0.2714 (268) S=0.001	0.2326 (268) S=0.001	0.6833 (268) S=0.001	0.3600 (258) S=0.001	0.9205 (268) S=0.001	0.8446 (268) S=0.001	0.7720 (268) S=0.001	0.2448 (268) S=0.001	0.6313 (268) S=0.001	0.9148 (268) S=0.001
ACCO1	0.0828 (268) S=0.088	0.0745 (268) S=0.112	0.6539 (268) S=0.001	0.3954 (268) S=0.001	0.8449 (268) S=0.001	0.8528 (268) S=0.001	0.7660 (268) S=0.001	0.2213 (268) S=0.001	0.6370 (268) S=0.001	0.9376 (268) S=0.001
ACCO2	1.0000 (0) S=0.001	0.1728 (268) S=0.002	0.1443 (268) S=0.009	0.0409 (268) S=0.253	0.3379 (268) S=0.001	0.1305 (268) S=0.016	0.1296 (268) S=0.017	0.0285 (268) S=0.321	0.0908 (268) S=0.069	0.1053 (268) S=0.043
ACCO3	0.1728 (268) S=0.002	1.0000 (0) S=0.001	0.0192 (268) S=0.377	0.0030 (268) S=0.480	0.2997 (268) S=0.001	0.0420 (268) S=0.247	0.0487 (268) S=0.214	0.2587 (268) S=0.001	0.0754 (268) S=0.109	0.0506 (268) S=0.205
SPE01	0.1443 (268) S=0.009	0.0192 (268) S=0.377	1.0000 (0) S=0.001	0.2863 (268) S=0.001	0.6625 (268) S=0.001	0.7736 (268) S=0.001	0.7541 (268) S=0.001	-0.0989 (268) S=0.053	0.4153 (268) S=0.001	0.9261 (268) S=0.001

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	ACQ02	ACQ03	SPEO1	SPEO2	ED12	AFQT49	EDAFQT	NBLACK	NATTRITE	NETPLUS
SPEO2	0.0409 (268) S=0.253	0.0030 (268) S=0.480	0.2863 (268) S=0.001	1.0000 (0) S=0.001	0.4280 (268) S=0.001	0.5050 (268) S=0.001	0.5715 (268) S=0.001	-0.1547 (268) S=0.006	0.1130 (268) S=0.032	0.5282 (268) S=0.001
ED12	0.3379 (268) S=0.001	0.2957 (268) S=0.001	0.6625 (268) S=0.001	0.4280 (268) S=0.001	1.0000 (0) S=0.001	0.7921 (268) S=0.001	0.6252 (268) S=0.001	0.2328 (268) S=0.001	0.4901 (268) S=0.001	0.8541 (268) S=0.001
AFQT49	0.1205 (268) S=0.016	0.0420 (268) S=0.247	0.7736 (268) S=0.001	0.5050 (268) S=0.001	0.7921 (268) S=0.001	1.0000 (0) S=0.001	0.9383 (268) S=0.001	0.0284 (268) S=0.322	0.5256 (268) S=0.001	0.9060 (268) S=0.001
EDAFQT	0.1256 (268) S=0.017	0.0487 (268) S=0.214	0.7541 (268) S=0.001	0.5715 (268) S=0.001	0.8252 (268) S=0.001	0.9383 (268) S=0.001	1.0000 (0) S=0.001	0.0027 (268) S=0.482	0.4128 (268) S=0.001	0.8640 (268) S=0.001
NBLACK	0.0285 (268) S=0.321	0.2587 (268) S=0.001	-0.0989 (268) S=0.053	-0.1547 (268) S=0.006	0.2328 (268) S=0.001	0.0284 (268) S=0.322	0.0027 (268) S=0.482	1.0000 (0) S=0.001	0.2072 (268) S=0.001	0.0795 (268) S=0.097
NATTRITE	0.0508 (268) S=0.069	0.0734 (268) S=0.109	0.4153 (268) S=0.001	0.1130 (268) S=0.032	0.4901 (268) S=0.001	0.5256 (268) S=0.001	0.4128 (268) S=0.001	0.2072 (268) S=0.001	1.0000 (0) S=0.001	0.4772 (268) S=0.001
NETPLUS	0.1053 (268) S=0.043	0.0506 (268) S=0.205	0.8261 (268) S=0.001	0.5282 (268) S=0.001	0.8541 (268) S=0.001	0.9060 (268) S=0.001	0.8640 (268) S=0.001	0.0795 (268) S=0.097	0.4772 (268) S=0.001	1.0000 (0) S=0.001
ACCTOTAL	0.2564 (268) S=0.001	0.2191 (268) S=0.001	0.6495 (268) S=0.001	0.3845 (268) S=0.001	0.8961 (268) S=0.001	0.8401 (268) S=0.001	0.7557 (268) S=0.001	0.2567 (268) S=0.001	0.6318 (268) S=0.001	0.9182 (268) S=0.001
NET	0.2691 (268) S=0.001	0.2304 (268) S=0.001	0.6368 (268) S=0.001	0.4091 (268) S=0.001	0.8986 (268) S=0.001	0.8264 (268) S=0.001	0.7625 (268) S=0.001	0.2412 (268) S=0.001	0.4750 (268) S=0.001	0.9268 (268) S=0.001
EXPECTED	-0.0506 (268) S=0.205	-0.0910 (268) S=0.069	0.4376 (268) S=0.001	0.1967 (268) S=0.001	0.2812 (268) S=0.001	0.3540 (268) S=0.001	0.3175 (268) S=0.001	-0.1754 (268) S=0.002	0.2525 (268) S=0.001	0.4267 (268) S=0.001
EFFECTIV	0.1560 (268) S=0.005	0.1153 (268) S=0.030	0.6801 (268) S=0.001	0.4635 (268) S=0.001	0.8116 (268) S=0.001	0.8200 (268) S=0.001	0.7954 (268) S=0.001	0.1913 (268) S=0.001	0.4052 (268) S=0.001	0.8811 (268) S=0.001

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	ACQ02	ACQ03	SPF01	SPE02	ED12	AFQT49	EDAFQT	NBLACK	NATTRITE	NETPLUS
C1	-C.0455 (268) S=C.229	C.C355 (268) S=C.260	-0.1651 (268) S=C.003	-0.1350 (268) S=0.014	-C.0902 (269) S=0.070	-C.1175 (268) S=0.027	-0.1220 (268) S=0.023	0.1231 (268) S=0.022	-C.0539 (268) S=C.19C	-C.1390 (268) S=0.011
C2	0.0544 (268) S=C.188	0.1218 (268) S=C.023	-0.1238 (268) S=C.021	-0.0061 (268) S=C.460	-0.0793 (268) S=C.099	-C.1115 (268) S=0.034	-0.0778 (268) S=C.102	-0.0681 (268) S=0.133	-0.1755 (268) S=0.002	-C.1582 (268) S=0.005

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	ACCTOTAL	NET	EXPECTED	EFFECTIV	D1	D2
ENROL	0.2258	0.2173	0.6535	0.0048	-0.4026	-0.0582
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.001	S=0.001	S=0.001	S=0.469	S=0.001	S=0.171
GRADM	0.2251	0.2211	0.6767	-0.0000	-0.3956	-0.0614
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.001	S=0.001	S=0.001	S=0.500	S=0.001	S=0.158
GRADF	0.2308	0.2237	0.6803	0.0001	-0.3914	-0.0635
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.001	S=0.001	S=0.001	S=0.499	S=0.001	S=0.150
GWRKM	0.1774	0.1700	0.5401	-0.0124	-0.2494	0.0321
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.002	S=0.003	S=0.001	S=0.420	S=0.001	S=0.301
GWRKF	0.1822	0.1730	0.5654	-0.0197	-0.2484	0.0233
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.001	S=0.002	S=0.001	S=0.374	S=0.001	S=0.352
VOCEDM	0.2250	0.2[illegible]9	0.6643	-0.0093	-0.3962	-0.0566
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.001	S=0.001	S=0.001	S=0.439	S=0.001	S=0.178
VOCEDF	0.2330	0.2218	0.6804	-0.0046	-0.4189	-0.0616
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.001	S=0.001	S=0.001	S=0.470	S=0.001	S=0.157
VOCMM	0.2[illegible]19	0.2353	0.6773	-0.0209	-0.2514	0.0993
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.001	S=0.001	S=0.001	S=0.367	S=0.001	S=0.052
READC	-0.0737	-0.0401	0.0068	-0.0139	-0.0858	0.0655
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.114	S=0.257	S=0.456	S=0.411	S=0.081	S=0.143
WRITC	-0.0512	-0.0519	-0.0113	-0.0334	-0.0505	0.0438
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.068	S=0.199	S=0.427	S=0.293	S=0.205	S=0.237
SPELG	-0.1013	-0.0675	-0.1313	-0.0276	0.0342	0.0225
	(268)	(268)	(268)	(268)	(268)	(268)
	S=0.049	S=0.135	S=0.016	S=0.326	S=0.289	S=0.357

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	ACQTOTAL	NET	EXPECTED	EFFECTI		D2
ARCTR	-0.0783 (268) S=0.101	-0.0753 (268) S=0.110	0.0121 (268) S=0.422	-0.1160 (268) S=0.029	.1407 268) S=0.011	0.1029 (268) S=0.046
MATH	-0.1042 (268) S=0.044	-0.0657 (268) S=0.138	-0.0683 (268) S=0.133	-0.0323 (268) S=0.301	-0.0625 (268) S=0.154	0.0537 (268) S=0.191
MINORITY	0.0441 (268) S=0.236	0.0247 (268) S=0.343	-0.1223 (268) S=0.023	-0.0015 (268) S=0.490	0.1720 (268) S=0.002	-0.0481 (268) S=0.217
INDIAN	0.0776 (268) S=0.103	0.0721 (268) S=0.120	0.2542 (268) S=0.001	0.0055 (268) S=0.464	-0.3655 (268) S=0.001	-0.0784 (268) S=0.100
ASIAN	0.0584 (268) S=0.171	0.0635 (268) S=0.150	-0.0587 (268) S=0.169	0.0300 (268) S=0.312	0.1527 (268) S=0.006	-0.3130 (268) S=0.001
BLACK	-0.0630 (268) S=0.152	-0.0651 (268) S=0.141	-0.3540 (268) S=0.001	-0.0056 (268) S=0.463	0.0699 (268) S=0.127	0.0242 (268) S=0.347
SPANISH	0.0557 (268) S=0.182	0.0371 (268) S=0.273	0.0021 (268) S=0.487	-0.0020 (268) S=0.487	0.2561 (268) S=0.001	0.0150 (268) S=0.404
TCHSAL	-0.1345 (268) S=0.014	-0.1201 (268) S=0.025	-0.3556 (268) S=0.001	-0.0365 (268) S=0.276	0.2856 (268) S=0.001	0.0383 (268) S=0.266
ZGPTAX	-0.0922 (268) S=0.066	-0.0936 (268) S=0.063	-0.2812 (268) S=0.001	-0.0064 (268) S=0.458	0.2505 (268) S=0.001	-0.1188 (268) S=0.026
ZACA2	-0.0774 (268) S=0.103	-0.0721 (268) S=0.120	-0.3267 (268) S=0.001	0.0047 (268) S=0.470	0.4609 (268) S=0.001	-0.0394 (268) S=0.439
ZASSVAL	0.0813 (268) S=0.092	0.0758 (268) S=0.108	0.3312 (268) S=0.001	0.0577 (268) S=0.173	-0.4291 (268) S=0.001	-0.0022 (268) S=0.486

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	ACCTOTAL	NET	EXPECTED	EFFECTIV	D1	D2
ZFLOCIN	-0.0741 (268) S=0.113	-0.0754 (268) S=0.109	-0.1454 (268) S=0.009	-0.0084 (268) S=0.445	-0.0364 (268) S=0.277	-0.1756 (268) S=0.002
ZFEDIN1	-0.1587 (268) S=0.005	-0.1420 (268) S=0.010	-0.3714 (268) S=0.001	-0.0437 (268) S=0.238	-0.0651 (268) S=0.144	0.2805 (268) S=0.001
ZFEDIN2	-0.1037 (268) S=0.045	-0.0990 (268) S=0.053	-0.4483 (268) S=0.001	0.0385 (268) S=0.445	0.2625 (268) S=0.001	0.1119 (268) S=0.034
ZPLTRANS	-0.0761 (268) S=0.107	-0.0742 (268) S=0.113	-0.2561 (268) S=0.001	0.0216 (268) S=0.363	0.2417 (268) S=0.001	-0.0323 (268) S=0.299
ZCUREXP	-0.0987 (268) S=0.053	-0.0941 (268) S=0.062	-0.3961 (268) S=0.001	0.0085 (268) S=0.444	0.4403 (268) S=0.001	-0.0385 (268) S=0.265
NFISCH	0.1825 (268) S=0.001	0.1765 (268) S=0.002	0.6234 (268) S=0.001	-0.0176 (268) S=0.387	-0.4038 (268) S=0.001	-0.1629 (268) S=0.004
TOTAL	0.5884 (268) S=0.001	0.5691 (268) S=0.001	0.3467 (268) S=0.001	0.8391 (268) S=0.001	-0.0812 (268) S=0.092	-0.1498 (268) S=0.007
ACC01	0.5732 (268) S=0.001	0.5550 (268) S=0.001	0.3751 (268) S=0.001	0.8464 (268) S=0.001	-0.0909 (268) S=0.069	-0.1393 (268) S=0.001
ACC02	0.2564 (268) S=0.001	0.2691 (268) S=0.001	-0.050[illegible] (268) S=0.205	0.1560 (268) S=0.005	-0.0455 (268) S=0.229	0.0544 (268) S=0.188
ACC03	0.2151 (268) S=0.001	0.2304 (268) S=0.001	-0.0910 (268) S=0.069	0.1153 (268) S=0.030	0.0395 (268) S=0.260	0.1718 (268) S=0.023
SPE01	0.6455 (268) S=0.00[illegible]	0.6368 (268) S=0.001	0.4376 (268) S=0.001	0.6801 (268) S=0.001	-0.1651 (268) S=0.003	-0.1238 (268) S=0.021

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	ACCTOTAL	NET	EXPECTED	EFFECTIV	D1	D2
SPEO2	0.3645 (268) S=0.001	0.4091 (268) S=0.001	0.1967 (268) S=0.001	0.4635 (268) S=0.001	-0.1350 (268) S=0.014	-0.0061 (268) S=0.460
ED12	0.8561 (268) S=0.001	0.6586 (268) S=0.001	0.2812 (268) S=0.001	0.8116 (268) S=0.001	-0.0902 (268) S=0.070	-0.0790 (268) S=0.099
AFCT49	0.8401 (268) S=0.001	0.6264 (268) S=0.001	0.3543 (268) S=0.001	0.8233 (268) S=0.001	-0.1175 (268) S=0.027	-0.1115 (268) S=0.034
EDAFQT	0.7557 (268) S=0.001	0.7625 (268) S=0.001	0.3175 (268) S=0.001	0.7994 (268) S=0.001	-0.1220 (268) S=0.023	-0.0778 (268) S=0.102
NBLACK	0.2567 (268) S=0.001	0.2412 (268) S=0.001	-0.1754 (268) S=0.002	0.1915 (268) S=0.001	0.1231 (268) S=0.022	-0.0681 (268) S=0.133
NATTRITE	0.6218 (268) S=0.001	0.4750 (268) S=0.001	0.2525 (268) S=0.001	0.4052 (268) S=0.001	-0.0530 (268) S=0.193	-0.1759 (268) S=0.002
NETPLUS	0.5162 (268) S=0.001	0.5268 (268) S=0.001	0.4267 (268) S=0.001	0.8811 (268) S=0.001	-0.1390 (268) S=0.011	-0.1582 (268) S=0.005
ACCTOTAL	1.0000 (0) S=0.001	0.5822 (268) S=0.001	0.3394 (268) S=0.001	0.8469 (268) S=0.001	-0.0892 (268) S=0.073	-0.1576 (268) S=0.005
NET	0.5822 (268) S=0.001	1.0000 (0) S=0.001	0.3241 (268) S=0.001	0.8632 (268) S=0.001	-0.0832 (268) S=0.075	-0.1363 (268) S=0.013
EXPECTED	0.3354 (268) S=0.001	0.3241 (268) S=0.001	1.0000 (0) S=0.001	-0.0044 (268) S=0.471	-0.3258 (268) S=0.001	-0.3707 (268) S=0.001
EFFECTIV	0.8465 (268) S=0.001	0.8632 (268) S=0.001	-0.0044 (268) S=0.471	1.0000 (0) S=0.001	0.0069 (268) S=0.455	-0.0174 (268) S=0.388

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	ACQTCTAL	NET	EXPECTED	EFFECTIV	D1	D2
C1	-0.0852 (268) S=0.C73	-0.C882 (268) S=C.C75	-0.3258 (268) S=0.001	0.0069 (268) S=0.455	1.0000 (0) S=0.001	-C.3760 (268) S=0.001
C2	-C.1576 (268) S=C.CC5	-0.1363 (268) S=0.013	-0.3707 (268) S=0.001	-0.0174 (268) S=0.388	-0.3760 (268) S=C.001	1.0000 (0) S=0.001

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APPENDIX B

CORRELATION OF THE THREE COMPOSITE VARIABLES (NET, EDAFQT, NETPLUS) WITH THE ENVIRONMENTAL VARIABLES

Note: The enrollment variables preceded by an "A" (such as AENROL) have been adjusted for (divided by) the number of recruiters at a recruiting station (NRCTR). Similarly, the financial variables that directly reflect the size of the school district have been adjusted for the average daily attendance (i.e., divided by ZADA2). ASSVAL was originally given in terms of the assessed valuation in the school district in terms of the average daily attendance (ADA2).

	NET	EDAFQT	NETPLUS
AENROL	0.1753 (268) S=0.002	0.2246 (268) S=0.001	0.2387 (268) S=0.001
AGRADM	0.1811 (268) S=0.001	0.2328 (268) S=0.001	0.2465 (268) S=0.001
AGWRKM	0.1682 (268) S=0.003	0.2239 (268) S=0.001	0.2225 (268) S=0.001
AVCCEDM	0.1700 (268) S=0.003	0.2157 (268) S=0.001	0.2347 (268) S=0.001
AVCCMM	0.1978 (268) S=0.001	0.2139 (268) S=0.001	0.2484 (268) S=0.001
ANHISCH	0.1866 (268) S=0.001	0.2197 (268) S=0.001	0.2497 (268) S=0.001
READG	-0.0401 (268) S=0.257	0.1011 (268) S=0.049	-0.0096 (268) S=0.438
WRITG	-0.0519 (268) S=0.199	0.0843 (268) S=0.084	-0.0370 (268) S=0.273
SPELG	-0.0675 (268) S=0.135	0.0365 (268) S=0.276	-0.0812 (268) S=0.093
MATH	-0.0697 (268) S=0.128	0.0586 (268) S=0.170	-0.0591 (268) S=0.168
MINORITY	0.0247 (268) S=0.343	-0.1162 (268) S=0.029	-0.0458 (268) S=0.228

	NET	EDAFQT	NETPLUS
INDIAN	0.0721 (268) S=0.120	0.0531 (268) S=0.193	0.1050 (268) S=0.043
ASIAN	0.0635 (268) S=0.150	-0.0216 (268) S=0.362	0.0058 (268) S=0.463
BLACK	-0.0661 (268) S=0.141	-0.1569 (268) S=0.005	-0.1511 (268) S=0.007
SPANISH	0.0371 (268) S=0.273	-0.0708 (268) S=0.124	0.0056 (268) S=0.464
TCHSAL	-0.1201 (268) S=0.025	-0.1260 (268) S=0.020	-0.1871 (268) S=0.001
ZGPTAX	-0.0936 (268) S=0.063	-0.1195 (268) S=0.025	-0.1220 (268) S=0.023
ZADA2	-0.0721 (268) S=0.120	-0.1330 (268) S=0.015	-0.1394 (268) S=0.011
ZASSVAL	0.0758 (268) S=0.108	0.1510 (268) S=0.007	0.1777 (268) S=0.002
ZPLOCIN	-0.0754 (268) S=0.109	-0.0540 (268) S=0.189	-0.0848 (268) S=0.083
AZFEDIN1	-0.1419 (268) S=0.010	-0.1073 (268) S=0.040	-0.1899 (268) S=0.001
AZFEDIN2	-0.0576 (268) S=0.174	-0.0543 (268) S=0.188	-0.0894 (268) S=0.072

	NET	EDAFQT	NETPLUS
AZPUTRAN	0.0318 (268) S=0.302	0.0725 (268) S=0.119	0.1149 (268) S=0.030
AZCUREXP	-0.0882 (268) S=0.075	-0.1112 (268) S=0.035	-0.1155 (268) S=0.029
NRCTR	-0.0753 (268) S=0.110	-0.1142 (268) S=0.031	-0.0797 (268) S=0.097
D1	-0.0882 (268) S=0.075	-0.1220 (268) S=0.023	-0.1390 (268) S=0.011
D2	-0.1363 (268) S=0.013	-0.0778 (268) S=0.102	-0.1582 (268) S=0.005

APPENDIX C

ACTUAL, EXPECTED, AND EFFECTIVENESS PRODUCTION SCORES
FOR INDIVIDUAL RECRUITERS BY NRD AND NRS

LOS ANGELES NRD

RECRUITER	NRS	EXPECTED (X .001)	NETPLUS	EFFECTIV (X .001)
1	36010	20212	27	1336
2	36020	19678	19	966
3	36020	19678	12	610
4	36020	19678	19	966
5	36030	20541	26	1266
6	36030	20541	34	1655
7	36030	20541	19	925
8	36060	19485	26	1334
9	36065	16404	20	1219
10	36065	16404	13	793
11	36080	14971	17	1136
12	36080	14971	9	601
13	36100	13292	21	1580
14	36100	13292	16	1204
15	36110	16398	20	1220
16	36110	16398	21	1281
17	36110	16398	22	1342
18	36130	22289	31	1391
19	36130	22289	22	987
20	36130	22289	19	852
21	36140	16570	9	543
22	36140	16570	8	483
23	36145	15894	21	1321
24	36145	15894	15	944
25	36170	20730	33	1592
26	36170	20730	33	1592
27	36200	19070	4	210
28	36200	19070	5	262
29	36200	19070	9	472
30	36200	19070	17	891
31	36210	21134	27	1278
32	36210	21134	25	1183
33	36230	15218	16	1051
34	36230	15218	7	460
35	36230	15218	21	1380
36	36240	16452	35	2127
37	36240	16452	24	1459
38	36240	16452	21	1276
39	36250	14646	14	956
40	36250	14646	20	1366
41	36250	14646	0	0
42	36250	14646	18	1229
43	36260	20592	18	874
44	36260	20592	18	874
45	36260	20592	15	726
46	36270	14808	18	1216
47	36270	14808	17	1148
48	36290	15129	40	2644
49	36290	15129	1	66

RECRUITER	NRS	EXPECTED (X .001)	NETPLUS	EFFECTIV (X .001)
50	36290	15129	17	1124
51	36300	18308	29	1584
52	36300	18308	18	983
53	36300	18308	21	1147
54	36320	21651	25	1155
55	36340	15639	18	1151
56	36340	15639	18	1151
57	36360	15387	1	65
58	36360	15387	12	780
59	36360	15387	1	65
60	36360	15387	14	910
61	36370	15065	8	531
62	36370	150[illegible]	14	929
63	36390	21322	13	610
64	36390	21322	12	563
65	36410	16575	13	784
66	36410	16575	12	724
67	36450	20057	15	748
68	36450	20057	27	1346
69	36460	17857	12	672
70	36460	17857	35	1960
71	36470	16511	16	969
72	36470	16511	18	1090
73	36520	16637	14	841
74	36520	16637	14	841
75	36560	17101	15	877
76	36560	17101	23	1345
77	36600	15772	19	1205
78	36600	15772	27	1712
79	36600	15772	1	63
80	36610	18967	5	264
81	36610	18967	16	844
82	36610	18967	12	633
83	36620	18253	3	164
84	36620	18253	10	548
85	36620	18253	39	2137
86	36630	17721	19	1072
87	36630	17721	20	1129
88	36640	17702	29	1638
89	36650	16969	18	1061
90	36660	16334	11	673
91	36670	21096	21	995
92	36670	21096	15	711
93	36670	21096	18	853
94	36670	21096	14	664
95	36690	15894	20	1258
96	36690	15894	21	1321
97	36690	15894	26	1636
98	36690	15894	31	1950

RECRUITER	NRS	EXPECTED (X .001)	NETPLUS	EFFECTIV (X .001)
99	36700	18660	23	1233
100	36700	18660	15	804
101	36700	18660	9	482
102	36710	24248	27	1113
103	36710	24248	26	1072
104	36710	24248	23	949
105	36735	22714	34	1497
106	36735	22714	11	484
107	36750	21747	2	92
		SAN FRANCISCO NRD		
108	38010	21041	18	855
109	38010	21041	38	1806
110	38020	20373	26	1276
111	38020	20373	17	834
112	38030	22998	31	1348
113	38030	22998	14	609
114	38030	22998	12	522
115	38030	22998	32	1391
116	38040	22617	8	354
117	38040	22617	18	796
118	38040	22617	10	442
119	38060	24998	27	1080
120	38060	24998	36	1440
121	38080	31222	21	673
122	38080	31222	64	2050
123	38080	31222	33	1057
124	38090	35349	51	1443
125	38090	35349	50	1414
126	38090	35349	31	877
127	38100	24989	20	800
128	38107	22405	18	803
129	38107	22405	11	491
130	38110	24427	36	1474
131	38110	24427	4	164
132	38110	24427	25	1023
133	38133	22438	20	891
134	38133	22438	22	980
135	38138	18677	19	1017
136	38138	18677	11	589
137	38140	14441	16	1108
138	38150	20313	34	1674
139	38160	22700	15	661
140	38160	22700	22	969
141	38160	22700	29	1278
142	38170	19154	21	1096
143	38170	19154	32	1671
144	38180	24944	9	361
145	38180	24944	26	1042
146	38180	24944	26	1042
147	38180	24944	21	842

RECRUITER	NRS	EXPECTED (X .001)	NETPLUS	EFFECTIV (X .001)
148	38185	20106	10	497
149	38185	20106	14	696
150	38189	15232	17	1116
151	38189	15232	1	66
152	38190	22372	14	626
153	38190	22372	16	715
154	38190	22372	19	849
155	38210	18429	23	1248
156	38220	25531	40	1567
157	38240	20763	29	1397
158	38240	20763	26	1252
159	38250	17679	12	679
160	38270	19253	23	1195
161	38270	19253	26	1350
162	38270	19253	38	1974
163	38275	24960	3	120
164	38275	24960	30	1202
165	38275	24960	25	1002
166	38280	26688	29	1087
167	38280	26688	20	749
168	38280	26688	22	824
169	38280	26688	16	600
170	38280	26688	19	712
171	38290	25428	38	1494
172	38290	25428	29	1140
173	38290	25428	15	590
174	38290	25428	24	944
175	38290	25428	16	629
176	38290	25428	22	865
177	38300	27448	25	1057
178	38320	21858	32	1464
179	38320	21858	6	275
180	38335	18902	16	846
181	38335	18902	14	741
182	38335	18902	10	529
183	38335	18902	20	1058
184	38340	18403	34	1848
185	38340	18403	37	2011
186	38345	18834	16	850
187	38345	18834	38	2018
188	38345	18834	18	956
189	38345	18834	1	53
190	38345	18834	47	2495
191	38345	18834	4	212
192	38350	22394	18	804
193	38360	21605	7	324
194	38370	30212	25	827
195	38370	30212	49	1622
196	38370	30212	20	662
197	38380	21858	6	274
198	38380	21858	54	2470

RECRUITER	NRS	EXPECTED (X .001)	NETPLUS	EFFECTIV (X .001)
199	38390	21410	28	1308
200	38390	21410	22	1028
201	38390	21410	18	841
202	38390	21410	18	841
203	38400	23547	24	1019
204	38400	23547	20	849
205	38405	20635	17	824
206	38405	20635	25	1212
207	38410	18541	38	2050
208	38420	20081	45	2241
209	38420	20081	19	946
210	38420	20081	26	1295
211	38430	30209	11	364
212	38430	30209	26	861
213	38445	20986	25	1191
214	38445	20986	19	905
215	38450	15190	15	987
216	38460	26755	33	1233
217	38460	26755	24	897
218	38460	26755	23	860
219	38472	21067	15	712
220	38472	21067	14	665
221	38472	21067	11	522
		SAN DIEGO NRD		
222	40050	11609	17	1464
223	40050	11609	12	1034
224	40070	16161	17	1052
225	40070	16161	9	557
226	40070	16161	22	1361
227	40090	16743	11	657
228	40090	16743	38	2270
229	40150	15647	19	1214
230	40150	15647	17	1086
231	40160	16437	9	548
232	40180	18355	23	1253
233	40180	18355	12	654
234	40280	16607	16	963
235	40280	16607	16	963
236	40400	15787	15	950
237	40400	15787	21	1330
238	40400	15787	15	950
239	40430	20638	23	1114
240	40430	20638	18	872
241	40430	20638	19	921
242	40440	15567	25	1606
243	40440	15567	3	193
244	40440	15567	26	1670
245	40510	15185	13	856
246	40510	15185	27	1778

RECRUITER	NRS	EXPECTED (X .001)	NETPLUS	EFFECTIV (X .001)
247	40530	24312	20	823
248	40530	24312	31	1275
249	40530	24312	52	2139
250	40530	24312	17	699
251	40550	17778	9	506
252	40550	17778	21	1181
253	40550	17778	20	1125
254	40550	17778	10	563
255	40570	11198	1	89
256	40570	11198	8	714
257	40570	11198	15	1340
258	40570	11198	13	1161
259	40570	11198	0	0
260	40570	11198	5	447
261	40730	15389	5	325
262	40730	15389	9	585
263	40730	15389	4	260
264	40730	15389	18	1170
265	40730	15389	13	845
266	40761	12773	21	1644
267	40761	12773	10	783
268	40761	12773	15	1174

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